Customary Commerce

A historical reassessment of pastoral livestock marketing in Africa

Carol Kerven

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Overseas Development Institute

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* This section was written by Desirée Dietvorst and Carol Kerven

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Preface and Acknowledgements

Two issues have dominated discussion of pastoral development; how to induce pastoralists to market more of their livestock and secondly, how to control overgrazing by pastoralists. Here, the first of these issues is examined in the light of historical evidence on the relations between pastoralists and the market. In reviewing this material, some light is also shed on the second issue of 'overgrazing', although this is not the main theme of the paper.

The development of pastoral marketing is traced to around the end of the first decade after independence (the 1970s), for each country concerned, since the factors affecting marketing after that point are more properly addressed in a study of contemporary patterns.

The choice of case studies was based primarily on the importance of the pastoral groups in terms of their representativeness within the regions, and the extent of literature and policy which has been focused on these groups. These groups are defined as pastoral in the sense that they have sought to maintain themselves primarily on the basis of their livestock and thus for whom dependence on cultivation is not significant except following severe loss of livestock. It was initially planned to include southern Africa as a third region in which pastoralists form a significant component of the population, but time did not permit this latter case to be prepared; it is hoped that case studies from southern as well as north Africa can be included in a future publication.

The paper forms part of a larger research project on commercial change in pastoral Africa, which is being undertaken by the Pastoral Development unit at ODI. The author is a principal researcher on this project, together with Roy Behnke, Research Fellow for the Pastoral Development Network at ODI. The project is funded by the Overseas Development Administration (ODA) through the ESCOR programme, for economic or social research for the benefit of developing countries. We are grateful to ODA for the financial support provided.

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1
Overview: Market Integration of Pastoralists in the Past and Present

This paper traces the changing patterns of livestock trading and marketing among several pastoral groups: the Samburu and Maasai of Kenya, and the pastoral Fulani of Nigeria and of Niger. Each of these groups - located within the different geographical and historical contexts of east and west Africa - has had a long and varied involvement in livestock exchange outside their own communities[1]. The paper examines the processes that effected changes in the patterns of pastoral exchange and marketing.

It is unusual for historical analyses to be presented to audiences concerned with contemporary development issues such as livestock marketing. Our time perspective on development often seems to begin rather arbitrarily somewhere around the 1960s, marking the beginning of the post-independence era. So what has the history of pastoral exchange and marketing to tell us now? Indeed, this exercise began with a more modest and vaguely-conceived notion that since pastoralists had been linked into the indigenous trading systems that preceded colonialism, a brief description of these links would serve as a precursor for the 'main story', which was the recent integration of pastoralists into market economies in the past few decades. But it turned out that this was a misconceived view of pastoralists and the market, for closer inspection of the historical record revealed that pastoralists have been trading or marketing their animals for a very long time, during which time many factors have influenced the changing patterns of their market integration.

The record of livestock trading over time indicates that African pastoralism has neither in the past nor present been an inward-turning and self-sufficient production system, isolated from surrounding economies and events. Thus, African pastoralists have not necessarily had to be drawn out, unwillingly, in order to exchange their animals or animal products - for this reason, the term 'pastoral response', commonly used when describing economic change and marketing in the literature,

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[1] Livestock exchanges within pastoral societies, which serve many important social and economic functions, are not considered here.

is avoided here. 'Response' suggests a degree of passivity and reaction to external forces, whereas pastoralism can be viewed as having internally-generated requirements that lead to external exchange transactions. Pastoralists can be viewed as having a tactical approach to trading and marketing opportunities, engaging and disengaging depending on their needs or advantage rather on persuasion or coercion from outside. Only in this sense can we say that there have been pastoral responses to the wider economic opportunities around them.

The significance of the historical record is that it shows us that, contrary to our general understanding, pastoralists were not suddenly confronted with an external marketing system and a demand for their livestock which was inimical to the orientation of pastoralism. Rather, the customary commerce involving the exchange of livestock and their products was gradually but radically transformed through the interplay of factors external and internal to pastoral production systems. In each of the cases presented here, the sets of external and internal factors are different, thus allowing us to examine closely the nature of this interplay and its evolution over time under different conditions.

What we learn from this examination is of considerable relevance for future planning and policy regarding pastoral livestock marketing. We can begin to pinpoint the necessary and sufficient conditions that encourage livestock marketing by pastoralists, as well as distinguishing those conditions which tend to discourage marketing. It also becomes possible to discern the shifts in pastoral production and economic systems which accompany the shifts in pastoral marketing strategies, thus increasing our understanding of how such systems are likely to change in the future.

Internal factors which lead to exchange

There are two essential factors internal to pastoral production which explain why pastoralists have routinely been involved in exchange networks. The first factor is the inherent reproductive capacity of pastoral capital. Secondly, pastoralists, through their occupation of particular ecological niches unfavourable to agriculture, are groups who specialise in the production of livestock.

The reproductive capacity of livestock means that under normal circumstances pastoralism produces a capital gain which requires some active decision as to its most useful purpose to the producer (Barth 1973). The choices narrow down to reinvestment (keeping an animal for further reproduction), consumption by the producer, using the animal (e.g.

transport or draught power) or exchanging the animal for something more useful. As Swift reminds us:

> 'There is an important difference between pastoral and agricultural economies in this respect. In a pastoral economy...Only a few of the young males are needed for reproductive purposes, and except where they are used for transport or for traction, these males, and females whose reproductive span is over, may be disposed of without affecting the reproductive capacity of the herd. This surplus exists in all herds, however small...Households can eat these surplus animals, or they can barter or sell them for cereals' (Swift 1979:25).

Elsewhere, Swift (1986) has argued that it is to the benefit of pastoralists to convert surplus animals to grain, whenever and wherever the terms of trade - valued in terms of caloric energy obtained from meat versus cereal - are greater than unity; that is, pastoralists can obtain more calories by converting animals to cereals through exchange with agriculturalists. The same point has been made regarding the choices pastoralists have as to the disposal of milk from their herds (Kerven 1987).

Secondly, pastoralists are specialised types of producers. As defined for pastoralism, 'specialisation is predicated upon the existence of linkages between groups engaged in producing different items, which allow[s] them to exchange their products' (Bates and Lees 1975:1). Although principally referring to the specialisation based on exchange found among Middle Eastern and Asian pastoralists, Bates and Lees note that the definition is also applicable to many African pastoral societies. The case studies presented here indicate that pastoralism has not been able to provide all the products needed or desired by pastoralists, at all times, and that exchange linkages with non-pastoralists are thus a necessary result of specialisation.

In addition to providing direct capital gains, livestock held within the variable and unpredictable climatic regimes characteristic of pastoralism may be the only effective method of converting labour and vegetation (natural and cultivated) into stored energy (Lees and Bates 1974). This energy is then available for conversion back to consumable form when necessary. As Schneider pointed out for East Africa, 'grain is customarily exchanged for livestock in good times, the animals being reconverted back to grain in bad times' (1964:67).

Thus, since pastoralists specialise in production of a reproductive resource, there will arise certain circumstances in which pastoralists have an incentive to exchange - when terms of trade are favourable - and other circumstances when pastoralists must exchange by necessity, to meet their minimal subsistence requirements. When these circumstances occur is marked by the shift in the use value relative to exchange value of livestock. The use value of livestock is composed of the various substances and qualities which they provide to their owners - milk, meat, blood, hides and skins, draught power etc. It is mainly for their use value that subsistence-oriented pastoralists have kept livestock. But as we have seen, even under subsistence forms of pastoralism, livestock have had a potential exchange value, which *under certain conditions, may exceed their use value.* Estimation of use value alters in relation to changing exchange values, and as the term implies, can only be realised by direct use of the commodities (livestock and their products in this case). The exchange value is relative, depending on the value of the same commodities to different potential users. Thus relative value can only be realised in the process of exchange between potential users. The conditions under which exchange value exceeds use value are those in which we would expect, and in fact find, that pastoralists voluntarily exchange their animals for other commodities. These conditions vary geographically, by season and from year to year, and account for the relative differences and fluctuations in exchange value (Swift 1986, Kerven 1987).

Pastoralists are not completely able to control the exchange value of their livestock or products. Demand for these commodities is externally-set by the wider economy within which pastoralists operate. When pastoralists have been primarily oriented towards subsistence production, in which exchange features as a necessary complement rather than as the main goal of production, the subsistence herd management system has often prevented pastoralists from taking advantage of the seasonal and longer-term shifts in exchange value. Thus we find for example that in the past, pastoral livestock sales patterns often were concentrated in the dry season when, although prices for livestock were lowest, the internal dynamics of the subsistence system necessitated sales at that season. However, improved market conditions have encouraged pastoralists to try and increase the exchange value of their animals and products by withholding animals for sale until prices increase in the rainy season. Additionally, improved market conditions have led pastoralists to spread their sales out annually, thereby avoiding market saturation caused by seasonal sales which typically depress the exchange value for pastoralists. Again, pastoralists have sometimes been able to increase the exchange value of their transactions by adjusting the types of animals supplied to the market to those most in demand externally.

Thus, far from pastoralism being a marginalised occupation on the geographical and economic periphery of more productively-important agricultural areas, we may view the more arid, pastoral regions serving as productive centres distributing livestock and their products outwards to other groups with a high demand for these resources. Deficits in the resource-base - when disaster reduces the livestock populations - can intensify these trade flows as pastoralists are forced to exchange more livestock for other foods, and rebuild their herds through exchange of stock with other pastoral groups.

External factors which promote or inhibit exchange and marketing

The cases documented here provide examples of the range of factors which may either promote or inhibit pastoral exchange and marketing. While these factors can be generally divided into natural occurrences versus human-initiated actions, any analysis of the impacts of these factors is complicated by the interaction between nature and humans. It is for this reason that emphasis is given to presenting a fairly detailed chronology of historical events so that we can desegregate the various factors which may influence marketing behaviour by pastoralists. A diachronic study is thus far more likely to disclose the effects of particular types of government policy, natural disasters or economic changes than a synchronic study in which the compounded effects of past events and actions cannot be individually assessed.

Drought

Certain of the factors which influence marketing constantly re-occur over time, although reaction by pastoralists to these constancies alters according to the configuration of other variable factors. Principal among the constant factors are droughts and the associated cycles of demand and price for pastoral livestock. The general pattern is that drought has both a short and medium term effect on pastoral marketing. In the short term, as livestock are threatened and the price of grain rises in a drought, the market is flooded with animals being off-loaded and sold to buy more expensive grain - the so-called stress-sales syndrome. Livestock prices rapidly drop. In the medium term, the post-drought period when pastoralists are trying to rebuild their herds, animals are withheld from markets, pastoralists are also trying to purchase animals and livestock prices therefore rise - the so-called perverse supply response. However, this pattern is modified when demand for livestock arises from sources unaffected by the drought and thus removed from the local demand/price changes summarised above. In other words, steady external demand for pastoral livestock overrides the local supply/price fluctuations. This modification is observed in the case of the Maasai in Kenya and the pastoral Fulani in Niger.

Livestock disease

A second natural factor - epizootics or the widespread outbreak of livestock disease - is much more directly susceptible to human intervention, and we have two extreme cases - Kenya and Nigeria - which very convincingly demonstrate the impacts of disease control on livestock marketing by pastoralists. In the case of Kenya, endemic and dangerous livestock diseases were not effectively controlled in pastoral areas for much of the colonial period. The continued presence of these diseases then necessitated policy measures designed to protect European ranches from the threat of disease from pastoral livestock. These measures were enshrined in the quarantine controls which, by curbing pastoral access to formal livestock marketing structures, became an instrument to reduce economic competition between pastoralists and ranchers for a share in the market. Consequently, pastoralists had either to circumvent official measures or else curtail their marketing activities.

A very different situation arose in Nigeria, which although also under British rule in the colonial period, received early and thorough attention from the authorities on the matter of disease control among pastoral livestock. As a result, pastoral Fulani were able to sustain relatively high rates of cattle sales which met much of the demand for livestock which simultaneously developed under British rule in Nigeria. Thus, in Nigeria official support given to the veterinary service was one of the key factors in boosting the marketing of pastoral livestock, while in Kenya, neglect of the veterinary service, whether by design or default, prevented pastoralists from taking full advantage of the new market opportunities which developed under colonialism.

Government taxes

Government policies towards pastoralists in general and marketing of their livestock in particular are shown here to vary widely, both over time and from one country to another. The impacts of policy with respect to provision of veterinary services has already been discussed. But in several other spheres government policy is found, not surprisingly, to have had major positive or negative effects on livestock marketing by pastoralists.

One of the first administrative acts of both the French and British in the countries under discussion was the imposition of taxes; the first experience that many pastoralists had of the new colonial regimes was therefore the requirement to pay tax, which for pastoralists had to be financed from the sale of their livestock. The story of tax imposition is one of the familiar themes of colonial historiography, and it is not proposed merely to retell this story again, or to pass judgement on the merits or otherwise of taxation policies. But it must be pointed out that through the introduction of a tax payable in cash, the colonial governments in effect precipitated pastoralists into the monetary trade system very early in this century. Once livestock had to be sold in order to pay tax, new opportunities opened up for traders who could offer to buy the animals in cash and sell them elsewhere where they were in demand. This had the effect of increasing the circulation and consumption of livestock even across international boundaries. At the same time, pastoralists encountered a new marketing system in which they could, if it was possible for them to do so, sell more livestock in addition to those required for tax payments. Whether and under what conditions pastoralists chose to sell more or not is one of the central issues examined in this paper.

Variations in government taxation policy have also had discernable effects on the patterns of pastoral livestock marketing. Thus we shall see that in French-ruled Niger, early colonial tax policy contributed to a shift in the direction of marketing and the location of markets. In British-ruled Nigeria, taxation policy focused from the start on a tax per head of cattle based on the principle of a proportional income tax; although widely evaded, the effect of this tax was to reinforce contact between pastoralists and the market. In Kenya, however, pastoralists were required to pay a head or poll tax, unrelated to their livestock wealth. We may therefore speculate that pastoral livestock sales in Kenya were more voluntary than obligatory, as was the case in Nigeria.

Government interventions

A further variant in government policy has been the degree of official intervention in the marketing structure. Here again we find significant differences between French and British policy, between policy at different points in time, and between British policy in different countries.

In the first case study presented here, that of Samburu in Kenya, we see how local administrative officers wavered in their attitudes towards the indigenous livestock trading structure, alternatively proclaiming and then rescinding measures which attempted to intervene in the trading system. In the second case study, of the Maasai in Kenya, early efforts by pastoralists to enter the new colonial markets were officially discouraged. This was followed by a long period of benign neglect, justified on the grounds that the Maasai were culturally not disposed towards selling animals (while in fact the Maasai had been driven to surreptitiously selling animals). This neglect was then supplanted by a policy of actively exhorting the Maasai to sell their cattle through formal and official channels.

In the case of Nigeria, official policy is not so clearly marked by contradictory shifts, but seems to have evolved more smoothly over time, with the benefit of informed opinion from the veterinary service which had close and useful contact with Fulani pastoralists. The flourishing livestock trade which was expanded under colonial rule in Nigeria owed much to the lack of official intervention in the strong indigenous marketing system. In contrast to Kenya, where indigenous traders were at best tolerated and at worst, prevented from carrying out their trade, in Nigeria the government left livestock marketing in the hands of local traders. No serious attempt was made to establish a parallel formal market with controlled prices and other restrictions, as in Kenya. This is one of the hallmarks of the Nigerian livestock industry, and is undoubtedly one of the reasons for its great success.

French policy in Niger was never explicitly focused on the pastoral livestock trade, either in terms of development or suppression. Nevertheless, the trade was viewed as a source of revenue to be obtained via taxes and duties; these were reduced or lifted at certain points, but did have a major impact when in force. Taxes, duties and other administrative measures taken by the French caused a relocation of trade routes and livestock markets. A negative effect of the French measures on the marketing patterns of Fulani pastoralists was to push the pastoral zone northwards into the Sahel, away from local market centres in the agricultural zone. A positive effect was brought about through the re-orientation and expansion of livestock trade towards Nigeria, which greatly increased demand for pastoral livestock to supply this export market. Overall, French interventions towards pastoral marketing were characterised by an exploitative rather than supportive approach, in that attention was directed to raising revenue from the livestock trade. It is interesting, therefore, to note that some of the unintended impacts of revenue collection measures were to improve trade links with consumer areas.

Infrastructure

Official policy towards provision of infrastructure has also had a major impact on the propensity of pastoral livestock to be marketed. Overall, there is a positive relationship between provision of infrastructure and greater livestock marketing. This is seen clearly for example in Nigeria, where extension of a rail line to the northern pastoral production zone was followed by an immediate rise in the quantity of livestock exported from north to south; indeed, the French-ruled territory of Niger likewise benefited from this rail line, which strengthened the natural link between livestock production and consumption areas. On the other hand, in Kenya the lack of approved trek routes, abattoirs and health inspection facilities negatively affected the supply of pastoral livestock to urban centres. In Nigeria, such services were developed as a means of enhancing the supply of pastoral livestock to markets, while in Kenya, government livestock facilities were used to control and even impede this supply.

Land policies

One of the most interesting points which emerges from this historical review is the connection between colonial land policies and livestock marketing in the pastoral sector. We are able to detect how, in the case of Kenya, two of the most crucial issues surrounding pastoralism - the overgrazing controversy and the livestock offtake rate - have their roots in a political agenda relating to land rights rather than in scientific research or concern for pastoral welfare. Explicitly, official efforts to increase pastoral livestock marketing were grounded on perceptions of livestock overgrazing; it was argued then, as now, that relief of overgrazing could only be accomplished by increasing the offtake rate, hence more livestock sales were to be encouraged. However, an implicit link in this line of reasoning was that settler land interests meant that pastoral grazing areas had to be contained and confined to the less productive ranges. This cut off any natural vent for herd growth. To stem pastoral claims for rangeland desired or used by settlers, a vent for herd growth had to be devised which took the form of grazing controls and stock limitations backed up by government marketing schemes. The need to overcome 'overgrazing' and 'low offtake rates' was cited as the underpinning of this policy, although little if any evidence was adduced for these claims. Moreover, it may be noted that pastoralists, as the victims of a harsh land policy which removed their access to prime rangelands, were then subsequently blamed for supposedly mismanaging their land and livestock resources.

The significance of this connection is more than an historical footnote. Since the 1940s, the twin issues of overgrazing and offtake rates have been at the centre of policy, planning and biological research on pastoralism. Latterly, these issues have also caught the attention of social scientists. These issues have come to be defined as some of the key 'problems' of pastoralism. But the origin of these issues in the political concerns of a historical period should alert us to the fact that research focus may be compromised by past as well as present political agendas.

Demand and prices

All of the above factors have played some role in shaping the patterns of livestock trading and marketing in the case studies examined. But one outstanding factor remains which, more than any other single factor, has accounted for changes in pastoral marketing. This is the level of external demand and related prices for livestock or their products. It has been argued above that pastoral economies, based on specialised production of a reproductive resource, inherently encourage exchange under certain conditions. When the exchange value of livestock or their products is greater than the use (consumption) value, pastoralists have sought to exchange that part of their livestock resource which they could do without, in return for something they need or want more. When these conditions arise is a function of the external demand for livestock or livestock products. Even under the most dire conditions such as drought, it is only worthwhile for pastoralists to exchange their animals or animal products when the exchange will bring in more than simply using or eating the animal.

Demand for pastoral livestock and their products must also have a means to be met, if pastoralists are to be able to supply the demand. It is shown here, for the case of Niger, that market access has been a key factor in the changing relationships between supply and demand. It is especially noteworthy that where market forces have not been unduly distorted by government intervention, markets have tended to follow where supply and demand intersect. Negative effects of intervention are illustrated by the examples of Kenya and Niger, in which markets for livestock were occasionally restricted as a result of government policies, despite growing demand for livestock, and trade was accordingly hampered.

Demand levels which set the exchange values for livestock and their products are not within the control of pastoralists. Moreover, demand and prices have been volatile over time, in response both to local phenomena such as drought or increases of agricultural income due to cash cropping, and international events such as world wars and economic depressions. This is why, as we shall see, pastoralists seem alternately to engage in and retreat from marketing their livestock. But overall, the trend is clear. When demand and therefore prices for livestock has risen, pastoralists have become more active in marketing and are found to be price-responsive. Poor exchange values on the other hand, only attract pastoralists to market when they are forced to do so by government requirements or by natural disasters. The lesson is equally clear. Increased voluntary marketing by pastoralists of their livestock is dependent as much as anything else, on increasing the exchange value of livestock and their products in relation to the use value.

2

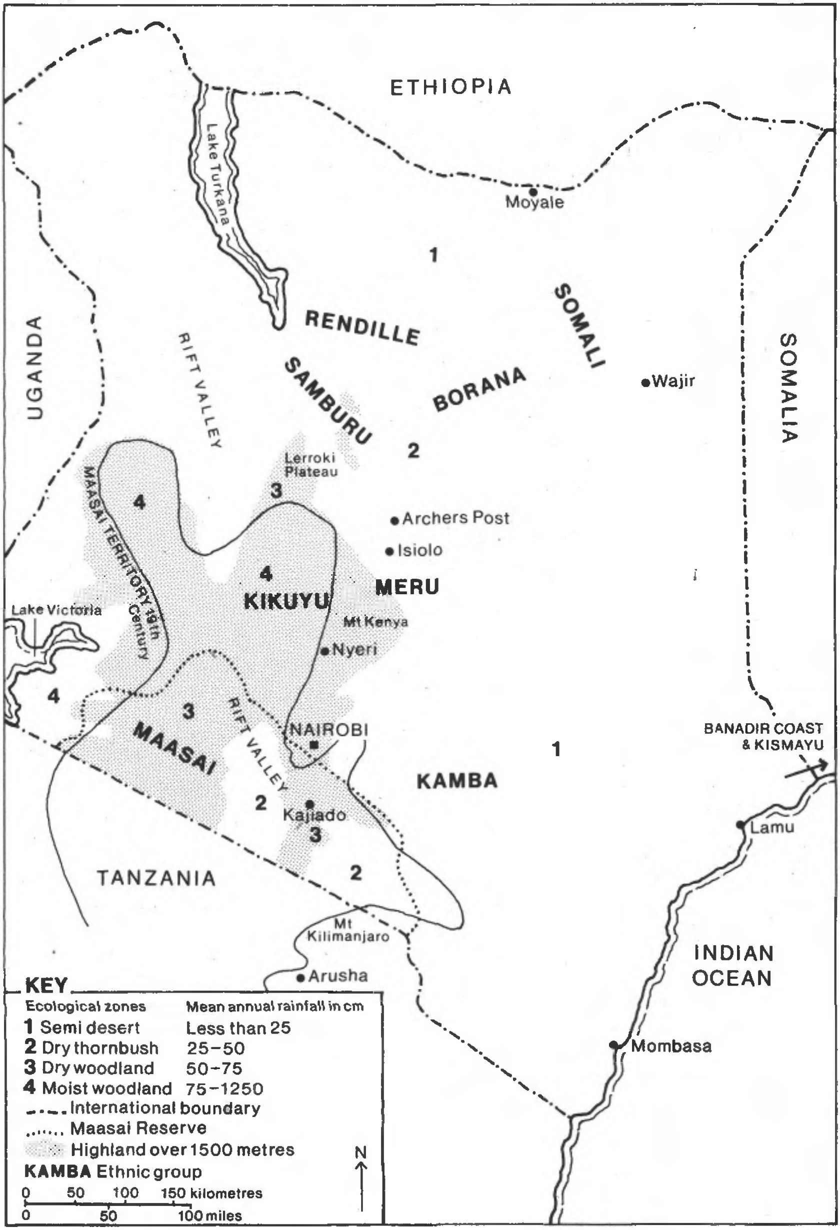
The Samburu of Northern Kenya

Trade and marketing by pastoralists in Kenya

This and the next chapter discuss the cases of two groups of East African pastoralists - the Samburu and Maasai - who came under the same government during this century in Kenya. The story we follow here generally falls into three phases - pre-colonial (mainly 19th century) trading systems on which written material is available, followed by a discussion of how colonial administration and European settler interests reshaped pre-existing patterns and introduced new variables in the economics of livestock trade. Within this second phase, the entire framework of livestock trading changed, yet often there is a continuity with pre-colonial patterns up the present. Not all pre-colonial trade links were severed or much altered - some trading partnerships have even been amplified. Through a state organisation, the colonial administrations could and did impose many barriers to free trade, (including physical), intervening in the demand, supply and pricing mechanisms but also at times providing better incentives for marketing.

The last phase, that of post-independence, sees fewer new variables introduced, and is more an intensification and consolidation of marketing policies developed under colonialism. In this there is sometimes a striking echo to some of the persistent perceptions of pastoral marketing habits that characterised the colonial era, in particular, the notion that pastoralists have a culturally-based resistance to exchanging their animals (bartering or selling), from which they have to be prised, in their own or others' interests. The implication is that pastoralists do not make rational economic decisions when risks, necessity and advantages are reasonably clear. In this notion, the issue of land is inextricably bound up with that of marketing; if pastoralists will not voluntarily reduce their stock, which would then require less land, inducing pastoralists to market more of their livestock is seen as the only way to limit the amount of land occupied by pastoralists. What began as a political agenda, to forestall African land claims against competing European interests, has evolved into an ecological agenda to protect the land for competing vegetation interests.

Map 1: Maasai and Samburu in Kenya



The Samburu in northern Kenya

The area now occupied by the Samburu, a Maa-speaking pastoral group related to the Maasai, lies to the east of Lake Turkana (Lake Rudolf in colonial times) and to the south of Ethiopia, in the northern Rift Valley system within present-day Kenya. By the end of the 19th century, inter-tribal pressures had gradually pushed the Samburu northeast into the semi-arid plain and mountainous area of the northern rangelands (Sobania 1979). The southern portion of their ranges included the Lerroki Plateau, an upland area with higher rainfall and better grazing.

The plains, with erratic and low rainfall, could not support agriculture, and were exclusively used by various groups of pastoralists, including the Samburu, practising relatively short-distance transhumance on a upland-plain seasonal regime.

The Samburu are not a very numerous group; estimates at different periods up to the 1930s gave a population of around 10,000 (Sobania 1979), while by the 1970s they numbered around 80,000 (Sperling 1987).

Pre-colonial trade in livestock and their products

Prior to the 19th century, there are scanty records of trading patterns in the east African interior (Abir 1968). The Samburu traded hides and skins with Meru, to the south, and drove their own stock to this market (Sobania 1979). In the latter part of the 19th century, Samburu traded their pastoral products with the agropastoral Dassenetch to the north, for millet, and later with the agricultural Meru for maize, beans and potatoes (Sperling 1987). Earlier trading links, as far back as the 18th century, had been established between Kamba traders to the south and the Rendille and Samburu (Lemma 1987). The Akamba opposed entry by Arab and Swahili coastal traders into these northern areas, but during the 19th century, growing demand for ivory and other products from the interior led to the development of two important trading systems which began to converge upon the area around Lake Rudolf (now Lake Turkana). These were the Arab and Swahili caravans from the coast which reached this area by 1880, and the Somali merchants from the Banadir coast further north, who had preceded the main wave of Somali conquests to the east of Samburu land in the 1860s (Abir 1968, Low 1963).

The trade with Somalis included the exchange of smallstock, hides and skins with cattle, cloth and beads from the Somalis and was the means for Samburu to rebuild their cattle herds after the great disaster of the 1890s when rinderpest and bovine pleuro-pneumonia decimated Samburu cattle (Fumagalli 1977, Sobania 1979). Long distance trade from the northern area, before the arrival of British administration, had three outlets; to the south (Meru), west through Wajir to Somalia and thirdly northwards involving the export of cattle through Moyale into Ethiopia (Sobania 1979).

Colonial market interventions

British administration reached the Samburu area by the second decade of this century. From this point onwards, the administration attempted to control trade in livestock, hides and skins both within and out of the Samburu area, through a series of often contradictory and disruptive measures.

It has been noted that the northern rangelands (the Northern Frontier Province, including Samburuland):

> 'demanded free trade because the whole region acted as an entrepot, servicing trade routes from Meru and Nyeri, Abyssinia, Kismayu and Lamu. It produced livestock for markets in Kikuyuland and at the Coast and distributed imports' (Smith 1969:35).

The natural route to the sea for the north was through Kismayu (in Italian Somaliland during the colonial period), a route controlled by Somali traders; Lamu, on the north Kenya coast, was another port through which imports came to the north. However, free trade was rarely to be permitted under British administration. For several decades, unregulated trade was officially viewed as a 'parasitic' and even 'seditious' activity, from which pastoralists needed protection (Smith 1969). This view then shifted, in the late 1930s, to criticism of the pastoralists for not selling more of their animals and thus relieving grazing pressure (McKay 1957).

The initial concerns of the British were to control tribal movements, particularly Abyssinian incursions in the northern border zone, and secondly, to open up trade routes through to Abyssinia, for commercial profit (Sobania 1979). One of the first British administrative acts was to impose a 'tribute' payable in stock, upon the Rendille and Samburu in order to supply the police force with meat and transport, in return for British protection. This was subsequently changed to a tax on the Samburu, instituted in 1914 which over the next decade was extended to other tribal groups in the north. The tax was assessed as one and half percent of each tribe's small and large stock. However, the pre-colonial barter trading systems persisted, which prevented the immediate introduction of direct taxation payable in cash.

While Samburu continued to trade their smallstock with Meru, in exchange for tobacco, knives, beads, maize and blankets, it was the barter trade involving cattle carried on with the Somalis which mainly exercised the administration. Sobania cites an administrator's concern with 'the subsequent decrease in the sheep and goats, which are limited and which are needed in the district itself for Government supplies and for increase' while accumulation of cattle by the Samburu was not viewed as in the interest of the Protectorate. Rather, according to this anonymous administrator, 'what is wanted is the increase of demand for goods among the nomadic tribes' (Sobania 1979: 171).

Prior to the general imposition of Poll Tax throughout the Northern Frontier Province in 1931, government revenues were derived only from trade licences and indirect taxes on formal trade. To this end, permanent shops were encouraged, while in return for the payment of permits and fees, shop-owners were accorded protection from the itinerant traders who had controlled barter trade and whose profit margins were lower (Smith 1969). The first shop serving the north had opened at Archers Post in 1910; by the end of the next two decades there were 17 shops within Samburu District (Fumagalli 1977). These were mainly owned by Somalis, as well as some Indians, who traded in ivory, livestock, rhino horn as well as maize meal. The Samburu obtained the cash needed to purchase goods from the shops mainly through their sales of smallstock and hides or skins rather than cattle. For the Samburu, taxation was changed to a poll tax in 1928, payable in cash; Sobania remarks that 'the encouragement of trading stock downcountry had introduced the element of cash in the north' (1979:170).

Concern with the Somali barter trade involving cattle led the administration to ban this trade in 1923. Earlier, (1916-1917) the barter trade between Samburu and Meru had likewise been banned, for fear of depleting Meru grain supplies. But the introduction of Poll Tax also in Meru gave greater impetus to the barter trade, since cash was in very short supply, and the barter trade in livestock for grain continued 'out of economic necessity and despite administrative disapproval' (Smith 1969:36).

The beginning of the 1920s was marked by a ban on cattle sales from Samburu, due to an outbreak of bovine pleuro-pneumonia; this ban lasted until 1927 but the barter trade with Somalis continued. This trade was again banned in 1930, 'to encourage cash trade in the district' according to the administration (Sobania 1979: 172). The introduction of

Poll Tax meant that the sale of livestock, as pastoralists' sole source of income, had to be further encouraged; the ban on barter was lifted in the following year, and trade in smallstock flourished (Smith 1969). However, itinerant trade was once more banned in 1934.

By the 1930s, Boran had begun to act as traders between the north and downcountry, presenting some competition to the dominant Somali livestock traders. The latter continued to be a source of concern to the administration. For example, in 1936, all Somali itinerant traders were ordered out of Marsabit District, adjoining Samburu District. Nevertheless, trade with Somalis continued to give the Samburu their main outlet for smallstock, in return for cash, blankets, tobacco and maize meal, during this period (McKay 1957). The annual export of between 40,000 to 50,000 sheep downcountry from the northern rangelands as a whole caused European farmers in 1934 to insist that this trade was threatening their livelihoods, since they were unable to compete in terms of price. This led to the establishment of a controlled livestock exit, with quarantines, at Isiolo (Smith 1969).

There was a brief unregulated spurt of export trade in livestock provoked by the Italo-Abyssinian war, in 1936, in which thousands of cattle were sold to Somalia and Abyssinia from the northern rangelands, through the auspices of Somali traders, but this quickly collapsed once demand had fallen (Smith 1969).

'Overstocking' and the land issue

The administration policy in the 1930s towards livestock sales by the Samburu was not only to encourage demand for goods paid for in cash rather than by barter; there was an underlying constraint in addition. As expressed by a colonial veterinary officer in the 1930s who believed that Samburu grazing lands were overstocked and thus required government intervention:

> 'To obtain a market for some 60,000 head of cattle is likely to prove an exceedingly difficult matter, politically and economically. The marketing of such a large number of animals, even in the event of the Samburu agreeing to such a course, would upset the industry in the Colony as a whole, and would be likely to meet with lively opposition from the European stock owners' (McKay 1957:275)

Up to this point, European ranchers to the immediate south of the officially-recognised Samburu grazing lands had been creating pressure on the administration to allow the expansion of their ranches northwards into the prime highland Samburu grazing lands and secondly, requiring veterinary measures to prevent disease from Samburu cattle spreading south (Fumagalli 1977). However, as was observed by the veterinary officer cited above, vaccination of Samburu cattle would only lead to a greater number of cattle surviving, for which, as yet, there was an insufficient outlet in the form of a marketing system. Thus developed the 'overstocking' thesis, as applied hence onwards towards the Samburu. This view held that Samburu had more livestock than their grazing lands could support. Since further grazing land could not be allocated, nor marketing channels developed (due to competing European interests), the course of action taken by the administration was to introduce grazing land controls, to limit the number of Samburu livestock within designated zones. The first grazing control schemes were imposed upon the Samburu using the highland portion of their area, in 1935 (Fumagalli 1977).

Although the official rationale for such controls was the need to avoid soil erosion due to overgrazing, 'evidence...appears to have been slender' - based on the recollections by one old Samburu man, of taller grass in the past, and of one early European traveller in the area (Spencer 1973:181). Sobania (1979) concurs that throughout the colonial era, no research was conducted on this issue in the entire northern rangelands.

The introduction of grazing controls was linked by the 1940s to the promotion of livestock marketing, by the government. Samburu keeping their livestock within the grazing schemes were expected to sell off cattle in excess of the quota permitted per owner, at officially-sponsored district cattle sales which were introduced to supply the national meat market. At this time, demand for meat within the Colony was greatly boosted by the need to supply the army during the Second World War. Compulsory de-stocking was re-introduced in 1951 as part of the grazing control schemes, having been tried in 1938 and failed due to lack of adequate markets, attractive prices and the response of the Samburu, which was to keep their 'excess' cattle with relatives outside of the grazing reserves (Sobania 1979, Fumagalli 1977). Government efforts to increase off-take included establishment of a fattening ranch and an abattoir in the southern parts of Samburu grazing lands, in the early 1950s.

Government marketing policy, post World War Two

In the post-war years, official marketing policy towards Samburu livestock once again seemed to waver, evidenced by the promulgation of more contradictory measures. In 1946 the administration attempted stock auctions at centres in the north, using Somali traders as 'the principal pawns' (Sobania 1979: 174). At first, the Somalis were to re-sell cattle bought from pastoralists to the Meat Marketing Board (MMB), but a year later, Somali stock traders were again ordered to stop purchasing, as the MMB decided to take advantage of good stock prices and purchase directly from producers. In 1949, the increasing shortage of meat downcountry led to the MMB offering higher prices for stock bought from northern pastoralists, resulting in the highest recorded sales of smallstock from the north.

By 1950, the high prices had fallen and the MMB 'lost interest in operating its own auctions' (Sobania 1979: 175), with the result that Somali stock traders were once more issued licences. The MMB became the Kenya Meat Commission in this year, was granted a monopoly, and was to be supported by the African Livestock Marketing Organisation (ALMO) which for the next ten years was permitted to set the price for purchasing livestock from Samburu for resale to the KMC (Perlov 1987). ALMO arranged monthly markets in the District, but would only purchase cattle of a certain standard, age and sex. A government quota for annual de-stocking of Samburu cattle was set at 9,600, and increased in 1955. Prices fluctuated from year to year, and could vary between 10 and 40 percent from one year to the next; periodic outbreaks of livestock disease also led to suspension of stock sales(see Table 1). There was the usual problem that Samburu needed cash mostly in the dry season or in droughts, to purchase grain, whereas at these times their cattle were in the worst condition and fetched the lowest prices. Spencer concludes, that during this latter colonial period, 'For the Samburu, stock sales were neither a regular nor a reliable outlet for their surplus stock' (1973:188). In the meantime, Samburu and other northern pastoralists continued to drive their stock to markets for sale illegally whenever prices were higher than those offered by the government (Perlov 1987, Spencer 1973), and an unknown quantity of smallstock was smuggled across the Somali border.

Overview of the colonial era

The colonial administration's policies towards livestock marketing by the Samburu evolved through three fairly discrete phases. The initial concern

Table 1: Sales of cattle, hides and skins, from Samburu District 1952-1978

Year Sold	Cattle	Average price,sh.	Hides/Skins sold	Events
1952[a]	7,511	53	n/a	Govt. destocking
1953	9,081	42.5	n/a	quota of 9,600
1954	7,209	54.8	32,145	
1955	9,084	79.9	16,885	
1956	9,557	94.7	23,669	
1957	2,119	69.4	97,266	Foot and Mouth
1958	10,102	97.9	49,067	
1959	9,543	96.9	77,460	drought
1960	15,614	106.1	79,379	drought
1961	8,724	83.0	172,134	floods
1962-67	n/a			
1968[b]	14,604		5,556	
1969	11,817		7,496	BPP & FM[c]
1970	3,632		8,297	
1971	16,886		36,886	end of drought
1972	7,903		11,058	
1973	3,495		9,399	
1974	none[d]		24,473	
1975	13,006		15,148	end of drought
1976	2,957		9,143	LMD holding area full
1977	3,183		11,924	
1978	3,183		17,489	
1978[e]		825		
1979		732		
1980		588		
1981		n/a		
1982		1,052		

Notes: a. Fumagalli 1977:211. b. Perlov 1987:85. c. Bovine pleuro-pneumonia and foot and mouth outbreaks. d. 10,000 estimated to be illegally sold (Perlov 1987). e. Perlov (1982) reported average prices for cattle sold in highland areas of Samburu District.

was twofold; to maintain a reservoir of livestock required to supply administration personnel within the area and secondly, to expand commercial trade within the interior through the participation of Samburu in the cash economy. The barter trade in livestock between Samburu and Somalis was viewed as the main hinderance to achieving these aims, since it led to an uncontrolled export of livestock and bypassed the cash economy. However, since no alternative cash market for livestock was implemented by the administration until the end of the 1930s, the Somali trade was intermittently permitted, as the only means by which Samburu could market livestock to pay the Poll Tax and dispose of surplus stock.

In the second phase, from the 1930s to the end of the 1940s, the administration gradually attempted to institute its own livestock marketing channels, at first as part of a containment policy towards Samburu grazing land, and latterly in order to meet increasing demands for meat within the Colony. In doing so, the administration had to depend, albeit erratically, on the Somali livestock traders, as they had established through their long involvement the only functioning livestock marketing system in the area. Here should be noted the important role played by the 'overstocking' thesis in colonial livestock marketing policy; initially applied in order to control territorial expansion by the Samburu through enforced livestock sales, the 'overstocking' notion gained more impetus when demand for beef elsewhere led the administration to view Samburu cattle as a marketable commodity which could also augment government revenues.

By the final phase, starting in the early 1950s, policy towards Samburu livestock marketing was subsumed into the national requirements of the developing meat industry, rather than being geared towards specific administration objectives for Samburu District. At Independence, therefore, Samburu livestock marketing was integrated into an official national marketing structure as well as operating informally via private traders as had been the case since long before British administration came to the northern rangelands.

The role of the state post-Independence

With Independence, official methods, but not policy, towards both the grazing reserves and marketing shifted radically; the 'overstocking' problem was to be tackled by the introduction of private tenure in the form of group ranches, while the linkage with de-stocking was severed. Grazing control was to be maintained through membership of a group ranch, without any specific marketing programme. Group ranches were demarcated in the southern Samburu highlands - the Lerroki Plateau -

which contained the best pastures, and not surprisingly were received enthusiastically by those Samburu who could gain membership, in contrast to the earlier reaction to grazing reserves (Perlov 1987).

A variety of market outlets have since been allowed to operate, including both large and small-scale private traders, or in the case of the Livestock Marketing Division (LMD) which after initially functioning then declined. In 1960, private traders were once again permitted licences to deal in Samburu livestock, while the new version of the ALMO, the LMD, was intended to purchase immature steers from the Samburu, to be resold for fattening to private ranchers downcountry. Naturally, the Samburu were reluctant to sell immatures (by weight) when their older steers would fetch higher prices, especially from private and sometimes illegal traders. Between 1970-75, the LMD was actively purchasing cattle in the north, including Samburu District. Annual purchases rose from 21,000 cattle in 1962 to a peak of 60,000 in 1975 for the northern rangelands but since 1980, the LMD's role in marketing has declined. Private traders now once again dominate, and significantly, it is still the Somalis amongst these who are the main traders. Problems of cattle disease, pricing, mismanagement of holding grounds and late payments to producers have accounted for the decline of the LMD in this area (Perlov 1987).

Increasing market-orientation among the Samburu

There are indications that Samburu were becoming more commercialised in the post-Independence period. The mid-1970s boom years for cattle marketing in this District, when private traders reported buying 10,000 cattle in a month, have ceased mainly due to uncontrolled East Coast Fever in the Samburu highlands. ECF has meant that many Samburu are disinvesting in cattle, in favour of smallstock. During the 1970s two severe droughts and tribal raiding drastically reduced Samburu cattle populations, in addition (Perlov 1987, Sperling 1987).

By the beginning of the 1980s, annual off-take in terms of sales over two non-drought years (1981-82) from one sample of Samburu herds at a group ranch was 7% (Perlov 1987:84). Although private traders can operate, either within the official system or illegally, there are still a number of disincentives for livestock marketing in Samburu District. High rates of disease are not being dealt with, the LMD holding grounds vital for disease control of stock in transit are not maintained, and Samburu stock are lighter than animals in the better-watered south. The droughts of the seventies and mid eighties led to a decline in the livestock:human ratio overall and in particular to a great loss of cattle (Sperling 1987). In the post-drought period, therefore, Samburu have concentrated on rebuilding their holdings through purchase of smallstock. As a consequence of these various factors, by the end of the 1980s, many bigger traders were reducing their activities in Samburu District. Their place is being filled by small-scale traders, often doing business illegally, but finding no lack of supply by pastoralists since these traders will purchase all quality of stock, in groups and not by weight. Perlov reports local District officials stating that 70% of cattle sold by Samburu are steers 2-3 years old, while the remainder are immatures and barren females; her own sample shows 75% of sales are steers (1987). All commentators on the issue of Samburu livestock marketing note that a large number of animals are sold within or outside the District without any official record; this seems always to have been the case. It is therefore impossible to quantify the actual livestock marketing patterns of the Samburu.

Pastoral trading patterns

We may now turn to the other side of the issue, which was the Samburu reaction to these various policies. On this, unfortunately, there is much less documentation. Firstly, it should be noted that given their ecology and pastoral system, the Samburu were, in the past, more interested in trading their smallstock, hides and skins in return for cattle and commodities. Cattle were highly valued, socially and ritually, and for their higher milk yield compared to smallstock. But cattle, being more susceptible to loss from droughts, diseases and raids, were always in high demand among Samburu, a demand which Somali traders were able to meet through bartering cattle brought in from the east for Samburu smallstock which were exported back eastwards. Hides and skins could be exchanged for non-pastoral goods with the settled agriculturalists to the south of Samburu country.

As we have seen, in the earlier period of British administration, there was no attempt to encourage Samburu to sell their cattle - there was no demand, no marketing structure and European ranching interests mitigated against such a policy. However, when demand for beef rose, a government marketing system was devised, and Samburu sold their cattle - particularly when the price was attractive and/or droughts prevailed (see Table 1). The Samburu have continued to sell their cattle, through official channels when these were available and sufficiently rewarding, and unofficially through the private trading networks.

Present-day commercialisation

We can now consider the extent to which present-day Samburu are engaged in the commercial livestock market. Perlov (1987) provides case study material which indicates that commercial transactions of livestock have become an integral part of Samburu pastoralism. By focusing attention not on the total offtake, i.e. of livestock sold out from the Samburu pastoral sector, but on the internal circulation of livestock, we find that nearly two-thirds of annual livestock transactions between Samburu are conducted via the commercial market - through sales and purchases. Traditional exchanges (brideprice, loans of milch cows etc.) now comprise the minority of transactions, and even within this category, 18% of transactions are for acquiring an animal to sell in order to raise immediate cash.

Samburu now use the commercial market for livestock as part of their strategies as herd-owners (Perlov 1987). These strategies vary according to the stage in a herd-owners' life cycle; young men have many more wage-employment opportunities outside the pastoral sector, and use some of their cash wages to build up their flocks and eventually herds through purchases on the commercial market from other Samburu. This is a period of capital investment using the market to cull weaker stock, 'trade up' smallstock for cattle, or replace cattle with smallstock when East Coast Fever threatens cattle. This stage in a herd-owners' life is followed by a return from wage-employment and consolidation of social networks through a higher proportion of traditional livestock exchanges using the stock capital accumulated earlier. Sales at this stage are mainly to finance their children's secondary education. Purchases are mainly of smallstock, to spread risk by diversifying. In the final stage of a herd-owners' life, consumption and the need to save labour are the principal concerns, so that older men buy more smallstock which are easier to manage and consume. In sum, younger men use the commercial market to acquire and accumulate livestock, while middle-aged and old men use it more to 'cash in' their livestock savings.

In terms of overall commercialisation, the data presented by Perlov suggest that Samburu are price-responsive, although still using the market largely as a means to continue subsistence production. As an illustration of price responsiveness, Perlov (1987) finds that Samburu livestock sales no longer differ significantly between wet and dry seasons; formerly sales were mainly concentrated in the dry season, as the means to purchase needed grain (Fumagalli 1977). In the early 1980s, small-scale traders reported that herd-owners would hold back their stock for sale to bigger traders, for higher prices in the wet season.

Reasons for livestock sales, in Perlov's sample, were divided between one third of herders selling to pay children's school fees, one third selling in order to purchase other livestock, and the remaining one third selling to meet subsistence or family needs (Perlov 1977). Livestock trading is also being practised by Samburu themselves, especially among younger men as an alternative to wage-labour migration as well as by more prosperous town-based salaried Samburu (Sperling 1987). It is also suggested that Samburu now rely less on meat and blood in the dry season, and more on maize meal purchased through sales of livestock (Fumagalli 1977).

Summary

The trading of cattle and smallstock within and from Samburuland continued by and large in the same patterns that preceded colonial rule, but was hampered by a series of government controls interspersed with periods when free trade was again permitted and apparently flourished, as colonial administrators attempted to replace existing indigenous commercial practices with those felt to be more beneficial to national and local interests.

The Samburu were geographically isolated from the more densely populated areas where demand for meat and animals was high, and as such, not as well-positioned as the Maasai to supply these demands. Although the northern rangelands (including the Samburu area) were an important supplier of livestock to the southern populous zones throughout the colonial period, their physical remoteness from the market centres meant that, in contrast to Maasailand, the northern rangelands were never viewed as a serious competitive threat to the European livestock industry. Nor, however, was livestock marketing in the northern rangelands seen as worth official support through intervention and investment.

It was not, therefore, until the latter part of the colonial period and the earlier stages after Independence that government institutions had any substantial positive effects upon the scale of livestock marketing in Samburuland, and by the second decade after Independence, these institutions were mainly inoperative, leaving livestock trade once again in the hands of locals.

3
The Maasai of Southern Kenya

The Maasai in Kenya

Maasai trading systems within the natural hinterland of Mombasa, the most important East coast sea-port in the 19th century, were more immediately and deeply affected than the Samburu by the British establishment of the East African Protectorate in 1895, as Maasailand lay in the direct path of European penetration, between Mombasa, the Kenyan highlands and Uganda. Certainly, their position on the route used by Swahili and Zanzibari traders, European travellers and missionaries meant that recorded pre-colonial history of the Maasai is much fuller than that of the Samburu.

In the 19th century, the Maasai grazed their cattle over vast areas of present-day Kenya and Tanzania (Jacobs 1965, Low 1963, James 1939). Their pasture lands extended from the Ugandan border in the northwest, to south of Mount Kilimanjaro into central Tanzania; east almost to the coast, and to the northeast up the east arm of the Rift Valley, flanked by Mount Kenya, to the northern rangelands. This area was roughly 500 miles from north to south, and at its widest point, some 200 miles from east to west, (Map 1) or a maximum limit of 100,000 square miles. Although scholars have debated the extent to which Maasai dominated the terrain over which they grazed their herds (e.g. Jacobs 1965), there seems little doubt that their military superiority and mobility ensured their right of access to desired pasture lands, through their ability to raid settled agricultural communities. But not all their contact with non-pastoralists was antagonistic; as shall be discussed below, the nomadic range of the Maasai brought them into frequent economic exchanges with agriculturalists.

The single most important effect of British rule for the Maasai who were situated in Kenya by the early 20th century, was the great contraction of their grazing lands brought about through the two Masai Agreements of 1904 and 1911 (Kenya Land Commission 1933). Not only did these Agreements force the bulk of the Maasai into a Reserve, which measured some 12,000 square miles in 1933, but the Reserve excluded much of their former best grazing lands in the better-watered highlands. These areas were designated for European farming and ranching. The containment of the Maasai into a semi-arid zone also curtailed their opportunities for economic exchange with settled agriculturalists in the highlands.

The number of Maasai within Kenya was given as 48,000 in 1933 (Kenya Land Commission 1933). Even if this figure was an undercount, it is apparent that by the 1980s the population had grown considerably, to 360,000, representing after the Somalis the second largest pastoral group in Kenya (Bekure et al 1991). It is likely that processes of tribal incorporation through intermarriage between Maasai and neighbouring agriculturalists partially account for the increase in the stated 'Maasai' population.

The Maasai as 'Pure Pastoralists'

The Maasai in the past have been portrayed as pre-eminently reliant on their own livestock resources for subsistence, and therefore, by implication, not involved in the exchange of livestock or livestock products for foodstuffs which is characteristic of other East African pastoral peoples, such as the Samburu (Jacobs 1965). This is referred to as 'an extreme commitment to a purely pastoral diet' by the Maasai, which according to Jacobs, was made possible through the high livestock-to-people ratio which persisted until the end of colonialism and a major drought in 1959-61 (1975:409). This rejection of non-pastoral foods was expressed through ritual avoidance of agricultural foods, and derogatory references to those groups of Maasai who were forced to depend on non-pastoral foods during the disasters caused by rinderpest, drought and cholera in the 1890s.

However, the historical record does not allow us to concur with this view of the Maasai. The emphasis placed by the Maasai on their pastoral commitment is in part a cultural ideal, expressing a mode of life to which every Maasai should aspire, by defining what it means to be a pastoral Maasai. For to fail in this ideal, by direct or indirect dependence on agriculture, is associated with times of disaster when it was necessary for some to abandon, temporarily or permanently, the pastoral mode of life. Thus the cultural ideal reinforces the specialisation implied by pastoralism, but does not thereby inform us as to the actual practices of pastoral Maasai.

Despite their cultural ideal, the Maasai have been involved in trading and exchanging their livestock throughout recorded history. Maasailand has been described as a 'reservoir and distribution centre for the stock trade' in pre-colonial and colonial times (Waller 1977:5). Indeed, it can be argued that the only way in which the Maasai could maintain their specialised niche as exclusively livestock producers was through the medium of exchange.

Trading patterns in the 19th century

Maasai were engaged in trading livestock or their products, including exchanges made to acquire foods, during the 19th century. The mid-nineteenth century saw an acceleration of the caravan trade from the east coast to the interior in search of ivory and slaves and many caravans passed through lands controlled by the Maasai (Low 1963, Jacobs 1965, Waller 1985). The difficulty of trading with Maasai was deliberately exaggerated by caravan leaders, in their efforts to deter Europeans, as the new economic power on the east coast, from competing in the lucrative ivory trade (Low 1963, Jacobs 1975). Caravans were able to trade cloth, metal, beads and later guns, with Maasai in exchange for livestock to provision the caravans, and for ivory which Maasai obtained from Dorobo clients.

Links with the caravan trade were also mediated via the Kamba, who from 1836, had established themselves near Mombasa astride one of the principal caravan routes westwards through Maasailand. Kamba acted as brokers between Maasai and the coastal traders, arranging the sale of ivory and cattle from Maasai, as well as bringing cattle and ivory in their own trading caravans to the coast (Lemma 1987). Through their access to manufactured goods from the coastal traders, Kamba were able to trade for smallstock with Maasai.

Maasai women traded donkeys - an animal to which women had disposal rights - as well as pastoral products with caravaneers in order to obtain cloth, metal and beads. Maasai men, in contrast, traded live animals, not only with the caravaneers or their Kamba brokers, but with neighbouring peoples (Meru, Kikuyu, Chagga, Arusha and Taveta) who could supply metal arrow heads, spears, and honey (Talle 1988).

Trade by Maasai in the nineteenth century was also carried out to obtain non-pastoral foods. Trade of livestock by-products was principally in the hands of women; Maasai women would barter livestock products (ghee, milk, hides and skins) with neighbouring agricultural tribes for grain, tobacco, gourds and other agricultural products (Gulliver 1967, Talle 1988, Waller 1985). It is suggested that while Maasai rarely initiated trade with neighbouring agriculturalists, they welcomed it not only as a source of non-pastoral products, but also as insurance against disaster - personal links with agriculturalists could become a vital fallback in times of drought or livestock pandemics (Waller 1977, Gulliver 1967). Important trading links between Kikuyu and Maasai involved the exchange of grains and other products for smallstock from the Maasai, and this trade persisted, though in altered form, through the colonial period (Marris and Somerset 1971). The pre-colonial trade was conducted by Kikuyu caravans of between 30 and 200 men (sometimes led and conducted by women, at times of inter-tribal tension, when only women could pass safely between tribes). Trade links were made between caravan leaders and individual Maasai households who would send requests for a Kikuyu trade caravan to come and gave protection to the traders against other Maasai warriors. Nearly all caravans travelled to Maasailand in the dry season, when demand for grain was greatest and terms of trade therefore better for the Kikuyu. Up to three caravans a month might visit one Maasai neighbourhood, in the dry season. The items brought by the caravans were millet, ochre (used by Maasai for decorative purposes), tobacco, spears, knives, honey and gourds (used as containers by Maasai women). In return, Kikuyu obtained smallstock, hides and skins. Terms of trade fluctuated from two to six grain loads (a porters' load) for a sheep, depending on scarcity of food among the Maasai.

In one particular instance, trade between pastoral Maasai and agriculturalists was focused at a market centre, at the site of present-day Arusha. Here, from the early part of the last century, was an 'agricultural "island"' from which the surrounding Maasai obtained cereals, tobacco, gourds and honey from cultivators (Gulliver 1967:432). Bartering for these items was conducted mainly by Maasai women, but men attended as well, to exchange smallstock for the products of the agricultural Arusha peoples. This trade was temporarily dislocated in the 1890s, when the Maasai were impoverished by rinderpest, but when it re-opened following the German conquest in 1898 it slowly proceeded to expand in this century as an important outlet for Maasai milk and livestock sales.

Early effects of British rule

British control over Maasailand (in present-day Kenya and Tanzania) was gradually exerted from the late 1890s; although in 1911 a British administrative officer was appointed to Kenya Maasailand it was not until 1933 that a equivalent official posting was made in Tanganyikan Maasailand (Jacobs 1965). But Maasai involvement in livestock trading was to be affected from the very beginning of British influence and administration. Alienation of Maasai grazing land to European ranchers at first created demand among Europeans for local cattle to stock the new ranches (Newland 1908). The Maasai were said to 'show an inclination' to trade, as prices for 'native' cattle boomed in the first decade of this century. Through their participation in British punitive raids on uncooperative groups such as Kipsigis and Nandi, between 1895 and 1905, the Maasai however helped to lower the demand and thus the price of cattle in the Protectorate. Many thousands of cattle were taken, some of which were distributed to Maasai *illmuran* (warriors) who assisted the British, but thousands were also auctioned to European ranchers (Lemma 1987, Newland 1908). Secondly, ranchers began to import pedigree cattle, which further lowered the market for local breeds. At this point, the need to protect nascent European ranchers led the administration to ban not only pastoralists but also Somali and Asian livestock traders 'bidding up' the price by engaging in the cattle auctions (Newland 1908).

Marketing in Maasailand was briefly to be encouraged by the administration, when World War I created a demand for meat which could not be met by the small number of European ranchers. In 1914-15, Maasai sold willingly to Somali livestock traders, but when the army barred this trade and became the sole purchasers (offering lower prices) in 1916, the Maasai engaged in 'passive resistance' to the ensuing enforced requisitioning by hiding their stock and bypassing the purchasing depots (Waller 1977). Nevertheless, demand for meat during the first World War was largely met by Maasai sales.

Over the same period that these events occurred, Maasai began to be taxed (in 1907) by the British administration. This tax was paid through the sale of livestock, in the case of the Maasai; other non-pastoral tribes in contrast, generally resorted to wage labour as a means of paying tax (Lemma 1987).

The local grain-livestock trade between Maasai and Kikuyu was also drastically altered in these early years of British rule. At first, after the 1904 Masai Treaty which moved Maasai out of the Rift Valley, trade links were much easier for Kikuyu caravans which no longer had to cross a mountain range to reach these northern Maasai (Marris and Somerset 1971). More Kikuyu were able to embark on this trade, but shortly, Asian shopkeepers began to trade from the administrative centres serving the northern Maasai. Itinerant Kikuyu trade with the Maasai could not compete with larger-scale Asian traders. The second Maasai move instigated by the British in 1911, forced the Maasai into the southern reserve, and made communications between Kikuyu traders and Maasai much more difficult. Some Kikuyu responded to this decline in their former barter trade by relocating to the Maasai Reserve and opening the first shops there. Thus was a mobile barter-trade link transformed into a fixed commercial retail enterprise, supplying grain not brought from the traders' own farms but bought from Asian merchants, and selling the new manufactured items in demand among the Maasai.

Long distance trade with Somalis

Maasai stock outlets (in what was to become Kenya) developed through another channel from around the beginning of this century, when long-distance trading by Somalis was expanded from the northern rangelands to include Maasailand (Kitching 1980). The northern herds were already recovering from the rinderpest devastations which affected Maasailand later in the 19th century. High demand by Maasai for cattle (particularly heifers) could therefore be met by Somali traders, through a series of livestock exchanges originating with camels in the extreme north east of the Protectorate, first bartered into heifers and smallstock with northern pastoralists (Samburu, Rendille, Boran and Somalis) which would be driven south and bartered with Maasai for their male cattle and smallstock. These animals would then be trekked by the traders northwards out of Maasailand to be sold for meat to the newly-founded Somali butchery trade supplying meat to migrants in Nairobi and other colonial towns. Kitching remarks that:

> 'the exchange logic of this trade revolved around one simple fact. This was that the optimum constitution of a slaughter herd was almost the exact opposite of the optimum constitution of a breeding and milk herd, i.e. one was male and mature, the other was female (with a few good bulls) and young' (1980:215).

Jacobs (1965) notes also that Maasai had customarily sought to improve their herds through exchanging milch cows for Borana bulls with Somali or Boran livestock traders.

The trade between Maasai and Somalis was hampered by the belt of European farms and ranches which spread across the northern limits of the Maasai reserve, and the trade was banned in 1915. Thus, after an initial flurry of involvement with the new livestock trade, the Maasai and their livestock trading partners (Somalis and Boran) were to be excluded from officially-sanctioned trading.

The trading network operated by Somalis facilitated the Maasai need to acquire heifers and dispose of surplus male cattle, as well as to exchange smallstock for cattle or agricultural foods. Traders exchanged livestock across large areas, profiting from the price differentials caused by uneven supply and demand of different types of livestock among various groups in the country. During the 1920s, Maasai began to operate as traders themselves, (a position they continue to dominate up to the present; Evangelou 1984) buying low and selling high, according to the variation in livestock values and preferences among peoples adjacent to the Reserve (Talle 1988, Waller 1977).

The monetarisation of livestock trading

The trading relationship between Maasai and Somalis continued however, but after World War I the barter form (based on the exchange value of a heifer, the most highly-valued beast in Maasailand) shifted to cash as the medium of exchange (Kitching 1980). Somali long-distance traders only dealt in stock, not in foodstuffs; this form of livestock trade was therefore a major change from local trade between Maasai and neighbouring agriculturalists, in which food stuffs and artisanal items could be bartered against livestock or livestock products. Currency had been introduced in Maasailand during World War I, when stock requisitioned by the military authorities were paid for in cash. Thus, if a Maasai wanted to acquire stock from Somali traders, but had no appropriate animal to exchange, or needed to dispose of stock, cash became the currency. From about 1914 onwards, Maasai also began to use cash to purchase maize, as noted by the sale of some 70,000 loads of maize flour in Narok in 1915 (Waller 1977). The new urban demand for meat, occasioned by the migration of Africans to work in the growing towns, also prompted the monetarisation of livestock trading. Urban Africans were paid in cash, and bought meat with cash from the Somali butchers, who obtained their slaughter stock from pastoralists - in the case of Nairobi, such stock came principally from the Maasai. Thus was initiated the conversion of surplus pastoral livestock into commercially-marketed meat; whereas previously, unwanted or surplus stock was exchanged for other more desired stock or for grain, there developed for the first time, an external demand for slaughter animals.

The effects of quarantines upon marketing

Many commentators note that it was the imposition of quarantines which had the most severe impact on Maasai livestock trading patterns - affecting both the pre-existing trading links and any potential for increased marketing under colonial administration. The issue of quarantines was at the heart of debates among administrators and between settlers and administrators about pastoral livestock marketing policies.

At first instituted to protect imported pedigree cattle on European ranches from tropical livestock diseases to which these cattle had no immunity (Spencer 1982), quarantines then became a means of providing price protection for cattle sold by European ranchers, by restricting the quantity of Maasai livestock which could be legally marketed (Waller 1977, Tignor 1976). For example, a District officer for the Maasai wrote in 1931, 'There can be little doubt that the Maasai have been excluded from the local meat market because the European vendors of stock have feared the lowering of the price of cattle' (Buxton, cited in Tignor 1976:327).

Livestock diseases such as East Coast fever, bovine pleuro-pneumonia and rinderpest were devastating and endemic in pastoral herds (for which, however, pastoralists had various preventative treatments; Tignor 1976). The veterinary department lacked the government support necessary to combat these diseases within the African reserves, and could only react defensively by quarantining pastoral livestock (Spencer 1982).

A change in policy was brought about by rising settler demand for cattle after World War I, which could not be met without some lifting of restrictions (Tignor 1976). Therefore in 1920, one outlet for Maasailand was opened by the veterinary department, through which inspected animals could be marketed. But in 1922, European settlers lobbied the administration to close this outlet, to cut off the supply of Maasai cattle to the Nairobi butchers (Waller 1977). Again, in the early 1930s, the veterinary service began to inoculate pastoral cattle against rinderpest, in order to allow free trade of cattle from the reserves. But Tignor notes that this experiment met opposition from the Animal Industry Standing Committee, which 'reflecting settler interests, pointed out that this procedure required heavy state expenditures'; subsequently the 'Veterinary Department reduced its program and ceased to aim at the total eradication of the disease among the Maasai' (Tignor 1976:323). At the same time, the state services, which had more staff committed to European ranches, had nearly eradicated the most serious cattle diseases from European-held herds. This discrepancy was noted by the head of the Tanganyikan veterinary service, who claimed that in Tanganyika (where no competing settler ranching interests existed), the service had managed to eradicate rinderpest from two-thirds of the African-held cattle by the mid 1930s.

The connection between quarantines and legal marketing channels for pastoralists was further complicated by the District officials' requirement to raise tax from Africans, mainly from the sales of livestock in pastoral areas. These officials increasingly criticised the Veterinary Department's quarantine policy, which led to difficulties for pastoralists to legally market their animals (Spencer 1982).

Effects of drought on marketing and livestock values

Droughts between 1918-21 lowered the exchange value of livestock, as grain was much in demand by Maasai, and was obtained by them through bartering stock for grain with Kikuyu and Kamba (Kitching 1980). The value of livestock rose again after 1922, but quarantines imposed in this period, to protect European livestock, severely restricted the official sales of Maasai cattle, although many were sold illegally across the border with Tanganyika and internally to the Kikuyu (Jacobs 1963).

The decade of the 1920s ended in a severe drought, while the general depression affected the entire colonial economy. The sale value of Maasai stock was drastically reduced; between 1928-1932, average marketed cattle prices fell from 50 shillings to 18 shillings (Talle 1988). Terms of trade for goats to maize fell from 1:7 (number of sacks to goats) to parity as maize was much in demand among the Maasai (Lemma 1987). Total officially-recorded sales of cattle from Kenyan Maasailand doubled by 1935, (compared to figures for the 1920s) in response to the droughts and livestock diseases reported at this time (Kitching 1980, Hollis 1943).

Supply, demand and price responsiveness: 1930s to 1960s

Any relationship between sales rates and prices is extremely difficult to determine, in this case, as 'policy variables on the demand side of the market, rather than forces on the supply side, exert a major influence' leading to the 'intersection of a demand curve and a supply curve that [is] subject to frequent policy-induced jumps' in the inter-war years (Mosley 1983:106-107). Thus, although for a ten year period (1924-34), the Maasai districts were under veterinary quarantine (which restricted sales to one stock route), when this ban was lifted and two new stock routes were allowed in 1935, sales increased by nearly 5,000 head of cattle. Three years later, a meat processing plant opened which relied exclusively on purchasing African cattle, and cattle sales from Maasai districts increased again by 4,000 (to 19,000 total in 1938). By this year, cattle prices had recovered to the level of the mid 1920s, after the sharp drought-induced drop in prices noted above.

Waller (1977) also argues that market restrictions - principally price and outlets - discouraged the Maasai from responding fully to whatever new marketing opportunities were created in the colonial period. He contends that the Maasai were highly sensitive to prices offered for livestock, as shown by their response to the demand for slaughter stock during both World Wars.

Protection for European ranching remained an administrative concern, which resulted in lower official prices set for pastoral livestock. Using the justification that European production costs were higher than African costs, differential prices for beef sold by settlers and by Africans were introduced (Lemma 1987). First grade beef was bought from settlers at 34 shillings per lb, third grade at shillings 19 sh. per lb, as compared to the price of 26 sh. per lb. for first grade and 10 sh. per lb. for third grade beef offered to Africans.

By the mid 1930s, it appears to have been official policy to encourage sales of Maasai cattle, although prices set for the 'official' market (the Nairobi abattoir) were at times half the price that Maasai received by selling their cattle through local traders, without having to trek their animals hundreds of miles to Nairobi (Mosley 1983). Official figures for the export of cattle and smallstock from the Maasai Reserve during the 1930s show annual totals ranging from 8,000 to 24,000 (cattle) and 14,000 to 48,000 for smallstock (Kitching 1980). Many of these animals were destined as stock for agriculturalists, particularly the Kikuyu, rather than for urban slaughter markets, as terms of trade had again turned in favour of agriculturalists (due to droughts and locusts). However, the unofficial market in stock from Maasailand at this time (as at other periods) is said to have been much greater (Kitching 1980, citing Kenya Land Commission 1933).

Compulsory sales were again imposed during the Second World war, to supply meat for the armed services, and annual sales of cattle from Maasailand rose to over 25,000 by the end of the war. However, in contrast to the military interventions in the market during World War I, this time the prices offered were high and the Maasai met their quota of sales to the Livestock Control board, without resistance or enforced requisitioning (Waller 1977). After the War, Maasai objected to the continued government monopsony (the Meat Marketing Board) 'because they felt that competition in the bidding would increase prices to their benefit' (Waller 1977:6) and private buyers were then allowed to compete.

But the end of compulsory buying and re-imposition of quarantine, by 1949, saw a fall in sales back to 11,000, and sales continued to fall sharply, being reduced to 5,000 by 1952 (all figures relating to officially-recorded sales). In 1950, the newly-named Kenya Meat Commission (KMC) lowered its purchasing prices, assisted by the restrictions on private buyers caused by the re-imposition of the quarantine. Maasai again withdrew from the official marketing channels and turned to illegal and more profitable livestock sales to neighbouring agricultural peoples of the Kikuyu, Chagga and Luo. Although official prices were higher at this time than before the Second World war, it is suggested that informal trade was more lucrative, and thus that more cattle were sold informally, at higher prices, than the official records indicate for this period (Mosley 1983).

Official figures continued to show low sales of Maasai cattle throughout the 1950s, although when a market for cattle opened up in Tanganyika from 1956, the annual level of sales suddenly increased from around 3,000 (government figures) to 25,000 (Meadows and White 1979). During this same period, Jacobs (1965) estimated that about 4% of Maasai herds were regularly marketed among Tanganyikan-based Maasai, to pay taxes and purchase commodities, while herd structures showed that only 11% of cattle were bullocks and 7% were bulls. Yet, despite the documentation from district colonial officers at the time (noted in Kitching 1980 and Mosley 1983) that Maasai throughout this period preferred to sell their livestock on the private (and often illegal) market where prices were higher, White and Meadows state that no adjustments need to be made to published statistics for cattle sales from Kajiado District during the 1950s, since 'there has been no advantage to be gained by smuggling cattle out of Kajiado District...The officially organised sales offered good prices for cattle' (1979:9). It is difficult then to understand why official Maasai cattle sales should have dropped to an average of 3,000 in the early 1950s from rates in the 1930s and 1940s of between 10,000 to 15,000 in years when neither drought or military quotas would have forced sales upwards.

Immediately before and after Independence, the price paid by KMC for Maasai cattle was around half that obtained in Tanganyika, and Maasai sold their cattle southwards; as Jacobs noted:

> 'So aware are Kenya Maasai of the higher prices paid in Tanganyika that there has flourished for years now an illegal market trade across the border, to which many Kajiado administrators have turned a blind eye ...in the absence of adequate or fair marketing conditions in their district' (1963:5)

'Overstocking' and land use reform policies

A change in official policy towards pastoral livestock marketing occurred after World War II, within the Colony of Kenya, as part of an overall policy concern that African land areas were overpopulated with livestock and people. By the early 1950s policy shifted to African land use reform (Migot-Adholla and Little 1981). For the Kenyan Maasai, it was probably the case that having lost most of their best dry-season grazing land early in the century to European settlers, population pressure, combined with the lack of secure and attractive market outlets, had led to overstocking and range degradation in portions of Maasailand (Jacobs 1975). Jacobs notes the decline in 'ideal' Maasai herd and range management practices, (based on grazing mobility) in those areas where Maasai had been confined to sub-optimal ranges, and the overgrazing which resulted. The Swynnerton plan (1954), addressed the range degradation issue in Kenya's arid lands, recommending that livestock should be limited through the provision of regular markets to 'absorb all excess stock', linked to other developments in water, disease and pest control, and the introduction of grazing schemes (cited in Migot-Adholla and Little 1981).

Livestock marketing channels were to be enhanced through purchasing by the Kenya Meat Commission (set up in 1950) but failed to attract pastoralists (including the Maasai) since the KMC could not compete with prices that private traders were willing to pay (Evangelou 1984). The African Livestock Marketing Organisation was then empowered to take over the buying of African-raised stock, but likewise failed to match private buyers' prices, despite being allowed to pay 'subsidised' prices at times. Furthermore, disease-control measures continued to restrict movement of trade stock between areas, but Maasai evaded these by trading southwards to the Tanganyikan market. By the end of the colonial period, there was a 'market dichotomisation' between the European and African (including Maasai) livestock trades; the former handled through the KMC at controlled prices and the latter largely handled by private traders, with fluctuating and usually higher prices (Evangelou 1984).

Grazing schemes were another principal mechanism introduced by the Colonial government in the 1950's, aimed at increasing marketing among pastoralists. The contribution of marketed produce from pastoralists to the national economy was viewed as insufficient, and semi-arid areas became a financial liability when famine relief had to be organised (Ruthenberg 1966). Partly to promote greater off-take and partly to conserve the rangeland, three grazing schemes were founded in Maasailand at this time, but these schemes were abandoned by the early 1960's after failing to gain compliance on stock limitations from Maasai settled onto them (Evangelou 1984). Since water and veterinary services were provided as part of the schemes, members no doubt wanted the maximum number of their livestock to have exclusive use of these assets. Finally, the severe drought of 1960-61 revealed the 'suicidal' effect of restricting grazing mobility on ill-planned schemes in an area of unreliable rainfall (Migot-Adholla and Little 1981:147), while the impacts (if any) on marketing are not known.

Changes in the colonial views of Maasai and livestock trading

We have discussed the impact of various direct and indirect policies of the colonial administration on Maasai livestock trading. These policies were influenced by changing perceptions of the Maasai and the economic importance of their livestock; these perceptions had to be balanced against pressures from the European settlers and were, ultimately, conditioned by economic and political circumstances within and outside the colony which affected the country's livestock industry.

In the early stages of European settlement, Maasai livestock were valued by Europeans as a means of stocking the first ranches (James 1939). Soon thereafter, however, the Maasai as well as their trading partners were seen by European settlers as rivals in the livestock market and their livestock as disease hazards to European stock. Many administrators, on the other hand, held the view that pastoralists were culturally opposed to the sale of their stock, and thus could not contribute to the nation's economy (Spencer 1982). This viewpoint threatened to became self-reinforcing through policy enactments. Thus, for example, the decision to concentrate scarce veterinary resources on European-held livestock was bolstered by the belief that 'African cattle owners were unwilling to adopt commercial attitudes towards their livestock' (Spencer 1982:118).

When international war broke out, Maasai livestock became, temporarily, a resource to be extracted for feeding the armed forces. Following this crisis and up to the end of the 1940s, there was never a unified policy directed at encouraging livestock sales from Maasailand. Instead, there were several opposing viewpoints within administrative circles, as to the benefits and feasibility of greater commercialisation among the Maasai. Marketing was encouraged or neglected, depending upon which viewpoint was in the ascendency.

For example, an effort was made by the senior Government veterinarian, in the 1920s, to create an outlet for Maasai stock through investment in a meat factory, but this scheme did not meet with the approval of his superior who preferred that Maasai livestock continue to be a resource for settler farms and to circulate in inter-tribal trade rather than directly compete with settler stock sales (Spencer 1982).

It was recognised by most observers at the time that increased formal sales must depend on vastly improved veterinary assistance, to eradicate diseases - but this the colonial administration was unable or unwilling to finance. There was also the problem, as expressed by the Deputy Director of Animal Husbandry in 1936, that European ranchers opposed the eradication of stock disease in the reserves, as this would produce more healthy animals available for marketing (Tignor 1976). European ranching was a much more costly method of raising beef than Maasai pastoralism (e.g. the importation of pedigree stock, costs of fencing and labour); thus Maasai cattle could potentially be sold in quantities and at prices which would ruin the European cattle industry, if not controlled.

Visible signs of land pressure led some contemporary observers to conclude that the Maasai were culturally resistant to selling their stock and thus relieve pressure (e.g. Hollis 1943). Others, however, pointed out that the quarantine meant that:

> 'The onus for the present overstocking does not lie entirely on the shoulders of the tribe' and that 'the effect of this quarantine has been to deprive the Maasai of the right to sell as many cattle as they desire to meat-eating tribes, and thus and at the same time and in the same Colony we see overstocking in some reserves and a shortage of meat in others' (James 1939:66).

Indeed, this author expresses the colonial dilemma very clearly; on the one hand, according to the same author, the Maasai had been confined to 'the less favourable environments' of the Colony, for which their 'extensive pastoralism' was 'inadequate' (1939:54,59), and thus were demanding an increase in their tribal area (to the Kenya Land Commission in 1933). On the other hand, he remarks that the provision of market outlets and measures to relieve land pressure were constrained:

> 'the association of Kenya policy with the interests of its white settlers...has prevented the Administration from paying serious

> attention to the institution of commercial pastoralism in the Reserve' (James 1939: 64).

As early as the 1920s, concern had been expressed by administrators at land pressure in the Maasai Reserve. The government's concern had then shifted:

> 'to a desire to conserve grazing land to prevent overcrowding, degeneration, and consequent demands for an extension of the area' (Spencer 1962:130).

Independence: The roles of the State and privatisation

Following Independence, the Kenya Meat Commission (KMC) was re-orientated towards supplies from pastoral livestock, having been mainly purchasing from European cattle-owners in the colonial period.

At first, Maasai increased their sales to the KMC, but price remained a constraint, and so the KMC was again bypassed through Maasai sales to private traders. In the mid to late 1960s, differences between Department of Agriculture estimates for slaughtered beef cattle and KMC purchases indicate that, nationally, only about 10% of slaughter cattle were sold to KMC (Kitching 1980). Not surprisingly, the KMC was showing massive losses by 1967 (Evangelou 1984), and by the early 1970s, KMC's legal monopoly over commercial slaughter was rescinded and private slaughterhouses were permitted for the first time. The first two private abattoirs were sited on the outskirts of Nairobi, actually within Kajiado District. As a result, the proportion of commercial sales from Maasailand to KMC dropped from 69% in 1972 to 27% five years later. KMC was more selective than were private buyers in its purchasing policy, in terms of livestock grade and health, as well as paying lower prices than private buyers. Throughout the 1970s, real prices paid by KMC for beef and smallstock fell, due to effects of inflation (Kitching 1980). As a consequence:

> 'the marketing preferences of Maasai producers reflect their responsiveness to price advantages,' as the 'growth of private slaughterhouses at the expense of the KMC ...both encouraged and depended upon increased commercial offtake from Maasailand' (Evangelou 1984:72).

Direct purchasing and handling of trade livestock, on behalf of the KMC, was the responsibility of the Livestock Marketing Division (LMD), based on the former African Livestock Marketing Organisation. Its main role in Maasailand during the 1960s and 1970s was as a supplier of immature steers purchased from pastoralists in the northern rangelands, for fattening by Maasai private ranchers (Evangelou 1984). This has had an important positive effect on the level of commercial success among these ranchers. The LMD never developed as a purchasing agent in Maasailand, due to the prevalence of local livestock traders.

Several years after Independence, a major development programme was implemented in Maasailand, under the Kenya Livestock Development Programme (KLDP), with the principal objective of increasing marketed beef offtake (White and Meadows 1981). Under the umbrella of land tenure reform - from communal to ranch forms of land management - KLDP encompassed development of water resources, improved livestock, veterinary care and stock handling facilities, amongst other inputs. The effects of this programme on Maasai livestock marketing have been investigated in the comprehensive works by White and Meadows (1979, 1981), Evangelou (1984) and Bekure et al (1991), among others. However, a discussion of these effects leads us to the contemporary period and therefore lies outside the scope of the present paper.

Summary

The two East African cases discussed already, the Samburu in Chapter 1 and the Maasai in Chapter 2, share some common features in their earlier pre-colonial livestock trading patterns. Over this century, colonial administration and the ensuing differential policies applied to the Maasai and Samburu respectively, as well as accidents of geography, has resulted in divergent trajectories for each group in terms of commercialisation. Current marketing patterns and the level of commercialisation thus have their roots in the historically distinct kinds of involvement that Maasai and Samburu have had with livestock trading.

Livestock trading by the Maasai, however, suffered much more than Samburu trading from the conflicting concerns of settlers and administrators, which created a very unstable and insecure market environment for the Maasai. During much of the first half of this century, marketing outlets for Maasai stock were deliberately limited, to protect the European ranching industry from economic competition and from livestock diseases endemic in Maasailand. Constrained by these barriers and by low official prices from selling their stock to the natural market of the urban areas to the north, Maasai resorted to smuggling stock for sale southwards into Tanganyika and illegally selling stock to agricultural tribes.

Throughout the latter part of the colonial period, and for the first decade after Independence, various forms of government marketing schemes operated, aimed at providing an outlet for the sale of Maasai cattle. It was only some years after Independence that private slaughter houses were permitted. However, demand for livestock was such that private traders could always offer higher prices than the official marketing channels, whose prices were set by the Government. The history of livestock sales among the Maasai documented here clearly demonstrates that the Maasai preferred to sell where they could obtain the best prices, and did sell whenever demand and prices were in their favour.

4
The Pastoral Fulani of Northern Nigeria

Introduction

Here we shall focus on the pastoral Fulani who came under British administration after 1900, in what was to become Nigeria. This is followed in Chapter 5 by the case of the pastoral Fulani who came under French administration in what is now Niger, immediately to the north of Nigeria. These two cases allow us to compare how the trade in Fulani livestock was affected by the different policies and economies found in two neighbouring states, one formerly under British and the other formerly under French control.

It is necessary to specify the population group under discussion. The Hausa term 'Fulani' is commonly used in the literature on Nigeria to refer to the group who refer to themselves collectively as Fulbe, not all of whom could be characterised as pastoral either in the past or at present. It is not our intention to delve into the multifarious classifications of the 'Fulani' (see, for example, Fricke 1979, van Raay 1975). Most of these classifications into subgroups are based on the degree of nomadism which is, however, a transitory condition since Fulani families can shift into and out of nomadism, according to shifting circumstances over time. We are only interested here in those Fulani/Fulbe who, whether settled, semi-nomadic or nomadic, can be considered as pastoralists at any given time. Earlier ethnographers (Stenning 1959, Hopen 1958) followed the indigenous categories in which Fulbe were subdivided into a ruling and settled aristocracy, other settled and primarily agricultural Fulbe and a third group which depended mainly upon their cattle - whom we here, following Stenning (1959), shall henceforth refer to as pastoral Fulani.

The pastoral Fulani of Northern Nigeria have been the principal cattle producers in that country, and their livestock and livestock products have dominated the trade in these items throughout the country. In the present-day, some 75% of cattle are concentrated in five States of northern Nigeria which lie mainly in the semi-arid Sudan savanna ecological zone (Map 2). These States are from west to east; Sokoto, Katsina, Kano, Bauchi and Borno (von Kaufmann 1981, Baba 1987). Since about the middle of this century, pastoral Fulani have also migrated southwards into the highland parts of the sub-humid Guinea zone, particularly to the Jos Plateau in Plateau State and Mambila Plateau in Gongola State (Fricke 1979). In this case study, we refer particularly to materials dealing with pastoral Fulani in the five northern States, although mention is also made of Fulani marketing patterns in the two highland areas of Jos and Mambila.

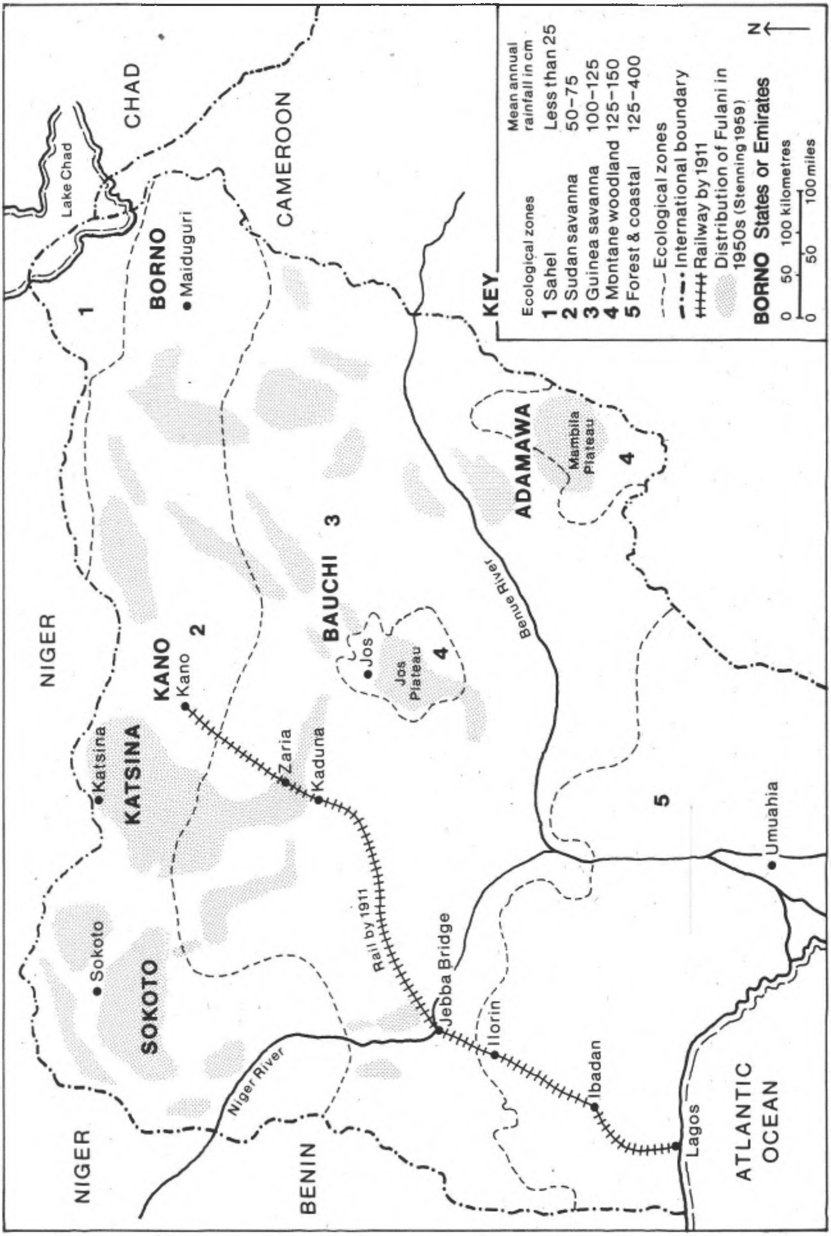
The number of pastoral Fulani has been difficult to establish since their definition as a group is based on mode of livelihood rather than permanent residence. The 1931 Nigerian Census produced an estimate of 460,000 Fulani speakers dependent upon pastoral activities in all of Northern Nigeria (Forde and Scott 1946). Pastoral Fulani were said to represent only between 2.5% to 5% of the population of Sokoto and Bornu Provinces in the 1950s (cited in van Apeldoorn 1978). Later estimates based on censuses suggest that in the mid 1970s, the livestock-dependent population of northern Nigeria was between two million and two and a half million (Ferguson 1976, van Raay 1975). Likewise, estimates of the proportion of the total cattle now held by Fulani vary, but there seems to be general agreement that the great majority of cattle in the northern region of Nigeria are still owned or managed by pastoral Fulani (van Apeldoorn 1978).

Livestock marketing in Nigeria

There are several distinguishing features of the Nigerian livestock trading system. Firstly, the direction of long-distance trade is fixed by the ecology and demography which effectively splits the country into a drier northern portion, less populated and less suited for farming, and a wetter southern portion in which the vast bulk of the population dwells but which has not been suitable for extensive livestock rearing, due mainly to tsetse fly. The direction of trade in livestock and their products is therefore along a north-south axis, and there has been a symbiosis in demand and supply between the livestock-deficient and livestock-surplus portions of the country, drawn together in the large-scale and persistent livestock trade from north to south.

A second notable feature of modern livestock trade in Nigeria is that following the imposition of British rule, little attempt was made to control or intervene in the pre-existing livestock trade. The reason for this is rooted in the colonial policy pursued by the British - particularly the first Governor, Lord Lugard - in Nigeria, in contrast to the policies developed for the 'settler states' such as Kenya, South Africa and Rhodesia. Within the latter, European settlers were actively encouraged,

Map 2: Pastoral Fulani in Northern Nigeria



many of whom naturally saw the potential for cattle ranching in the great savannas occupied by African pastoralists. As we have seen in the case of Kenya, settler ranchers then created pressure on the administration to protect their economic interests - which led to official blockages of the indigenous trading patterns as well as passive neglect of the pastoral sector. In complete contrast, during the early days of the Nigerian Protectorate;

> 'the tenor of the times, plus Lugard's experiences in India and East Africa, forbade the establishment of large-scale European enterprises in Nigeria. It was hoped that the alleged excesses in East and South Africa would not be repeated in West Africa' (Dunbar 1970:105).

The direct and indirect effects of this policy were to favour the livestock trading business in Nigeria. Directly, since indigenous livestock marketing did not threaten any European ranching or trading interests. Indirectly, since the land itself was not viewed as an asset to be developed by settlers, the produce of that land was viewed as the main asset contributing to the national economy. This is a key point in appreciating the different official attitudes taken towards livestock trading in Nigeria as compared to Kenya.

From the first, the British understood that livestock on the northern savannas were the main source of revenue for the Native Administrations - the Emirates upon which the British built indirect rule. Pastoral Fulani had been paying tribute in cattle and/or animal products to Emirs, prior to the British conquest. The formalisation by the British of a cattle tax (*jangali*) on Fulani pastoralists forced Fulani to continue disposing of some of their cattle every year. Stenning remarked that;

> '...as in other parts of Northern Nigeria,the first concern of the [British] Administration in Bornu with the Pastoral Fulani of that area was to turn them into a fiscal asset' (1959:235).

Ultimately, the value of cattle in terms of revenue could only be realised if cattle could be sold for cash, by Fulani producers. In their efforts to retain and expand upon the trading system, the British administration sought to protect the livestock resource, through the widespread implementation of veterinary programmes, and to facilitate (rather than control) the indigenous trading network through improvements of trek routes, together with provision of rail transportation and slaughtering sites.

There is a further noteworthy aspect of official policies which impinged upon livestock trade. This is the lack of apparent concern, until relatively late in the colonial period, about 'overstocking' and 'overgrazing' by Fulani pastoralists, and no associated efforts to enforce destocking and a higher rate of offtake (with the exception of the Jos Plateau). Several reasons may be ascribed to this; firstly, it was recognised in official circles that the level of cattle tax precluded the possibility of pastoral Fulani disposing of any more of their cattle through sales. Secondly, the absence of any official grazing restrictions, or administratively-created tribal reserves, meant that pastoral Fulani could and did migrate into relatively open areas through agreements reached with the existing occupants of those areas. Thus herd growth leading to potential overgrazing could be avoided by moving to new grazing areas (Stenning 1957). Thirdly, of course, there was no pressure from European ranchers to occupy prime pasture areas. For these reasons, official policy did not develop the 'overstocking and overgrazing' thesis leading to government attempts to control livestock marketing. Instead, market forces of supply and demand were permitted to develop of their own accord.

Pre-colonial trade

The pastoral Fulani have been involved in exchange and trade of livestock products and livestock for at least as long as historical records exist. For several hundred years before British rule came to northern Nigeria, the economy of the pastoral Fulani was bound up with that of the settled farming and trading Hausa, as migratory waves of pastoralists moved through and into the Hausa and Fulani states of northern Nigeria (Hopen 1958). Hausa-Fulani trading relations stem from the arrival of nomadic Fulbe-speakers in Hausaland, in the area between the forest and savanna that marks northern Nigeria, during or before the fifteenth century (Baier 1980). Hausa long distance traders (*fatake*), trading livestock as well as many other goods, extended from urban centres such as Kano to link northwards with the Sahara and north Africa, east to Darfur and as far as the Nile, west to Timbuktu, southwest to Asante and south to the coast (Okediji 1972).

However, until the time of the Fulani *Jihad* (Holy war) in the early 1800's, pastoral Fulani of north-west Nigeria (Sokoto) had less contact with and economic dependence on the Hausa. The *Jihad* led to a Fulani conquest of many of the Hausa states and brought closer integration between the two groups. Prior to this, Fulani lived in large and mobile camps, their diet was largely of milk, not grain (in contrast to the colonial period), and they dressed in skins and hides, rather than clothes from markets. Hopen comments; 'Undoubtedly there were trade relations with the Haasa but on a smaller scale than after the Jihad and in modern times' (1958:13).

The Hausa-Fulani trade was based on the exchange of milk from Fulani herds for grain from Hausa farmers, and the trade in live cattle. Urban markets in the Hausa-Fulani areas, in which many hundreds of cattle were traded or slaughtered, were mentioned by the mid nineteenth century European traveller, Barth (Okediji 1972). Earlier, there were reports from European travellers and missionaries of a large volume of cattle - estimates of 35,000 head - being traded from the Hausa-Fulani north to the market centre of Ilorin in present-day south-west Nigeria (Baier 1980, Okediji 1972). The principle commodities brought in return to the north by livestock traders were salt, natron (a livestock supplement) and kolanuts.

Transactions involving cattle also marked the political relations between pastoral Fulani and the Moslem states in whose lands they sought to graze cattle and obtain water. Tribute cattle were paid by pastoral Fulani to state rulers in return for the right to use the land ('grass money') while prescribed Islamic taxes such as alms, death duties and tithes also were required to be paid, in kind, although when possible, these requirements were flouted (Stenning 1959). The *jangali* (cattle tax) was a Hausa tithe taken over by the Fulani rulers, which had been set at 10% of herd wealth (Okediji 1972).

Early colonial rule and the cattle tax

After the establishment of the British Protectorate of Northern Nigeria in 1900, the system of taxation prescribed by Islamic law, which had been payable in cattle by the Fulani, was adapted by the British as a fiscal measure and method of gaining administrative control over the Fulani (Stenning 1959). At first under the British, taxation amounted to no more than the customary grazing fees but was eventually to become a tax assessed on herd size.

In 1906, *jangali* was established as a separate tax regulated by the British, 70% of which went to the Emirates for local administration. Local tax collectors were appointed, and the new cattle tax was payable annually at one time, in the rainy season when nomadic movements were reduced. The tax was also extended in 1912 to include calves over one year old. Fulani reaction to the new, more stringent taxation rules was predictable; many migrated away to the French-controlled territories northwards, or evaded the tax (Okediji 1972). As a result, greater efforts were made by the British, under the policy of administrative reorganisation, to create centres of Fulani settlement. Within a few years, this policy, in which Fulani chiefs were to settle and be made responsible for tax collection had led to substantial increases in tax collection and the growth of permanent Fulani settlements around the best wells and grazing areas (Stenning 1959). From this point onwards, policies aimed at extraction of surplus cattle from pastoral Fulani were linked to the issue of how to settle the pastoralists, so as to increase the extractable rate.

The rate of assessment was adjusted from time to time, according to official perceptions of Fulani ability to pay the tax. At first based on 3% of the herd, (including calves as mentioned) this was increased to 5% between 1905-07 (Stenning 1959). The rate per head started at 1sh.6d in 1904; the British administration attempted to increase the rate, on the basis of the increased value of cattle due to the large expansion in trading activities. But due to the ravages caused by rinderpest in 1913-14 and 1919-20, the rate was not raised until 1921, to 2 sh. per head of cattle (Okediji 1972). The economic depression of the twenties and early 1930s caused the British to reduce the rate in 1933, but it was again raised to 2sh. a head in 1937. In 1940, the tax was raised a further time, to 3 sh. per head in the northern provinces (Shaw and Colville 1950).

The new tax was required to be paid in cash, but this was however greatly hampered by the lack of a cash market 'at satisfactory prices' in cattle, which meant that tax initially had to be paid in kind, as before (Stenning 1959:83). In 1913, a British man visited the Fulani area, to examine prospects for ranching. He arranged for the purchase of Fulani cattle through the chief tax collector, which 'weaned the WoDaaBe from their traditional desultory system of tribute in kind' (Stenning 1959:85). This was the first time that the cattle tax was paid in cash.

The opening up of markets

One of the positive effects of the new British administration was the regain of peaceful conditions among the Emirates of northern Nigeria, following the 'Time of War' which had immediately preceded the British conquest. During that time, political instabilities between the various Emirates had led to restrictions on travel and trade, as Fulani and Hausa moved into walled towns and cities for defensive purposes. However, the cessation of armed hostilities saw an opening up of many more markets in which Fulani could trade, and permitted the free movement of traders between centres. A wider array of goods became available, for exchange with pastoral products (Hopen 1958, Smith 1962).

The British quickly recognised the extent of the wealth generated from the far-flung trade networks emanating from Northern Nigeria. It was reported that most of the beef consumed in the south was supplied by the Hausa caravans from the north, and one of the first British acts was to impose a Caravan toll, of which 95% was derived from the trade in livestock (Okediji 1972).

The volume of livestock trade from north to south grew rapidly in the first thirty years of British rule. Demand for meat in the agricultural south of the country expanded as real income among Nigerian farmers rose following the development of cocoa and palm oil as cash crops for export (Baier 1980). The growth of towns, particularly Lagos and Ibadan, also created higher demand for meat among urban consumers, while supply of meat to ships at Lagos saw a sharp rise during the First World war (Baier 1980). The number of registered Hausa traders in Lagos rose from nearly 2,000 to 4,500 between 1921 and 1931 with about half of these being cattle traders (Okediji 1972).

The single greatest stimulus to the north-south livestock trade was undoubtedly the completion of the railway in 1911 from Lagos to Kano, the traditional northern centre of the livestock trade. By 1918, nearly 13,000 head of cattle reached Lagos by rail alone, with the same or greater number arriving on foot; by the 1930s the quantity of cattle reaching southern markets had increased fourfold (Baier 1980).

The expansion of livestock trade between Fulani producers and Hausa traders which occurred in the first decades after the British conquest was noted with approval by the Acting Lieutenant Governor of the Northern Provinces, in 1921:

> 'The Fillani [sic] and Hausa stock owner is not doing much to develop an export and cold storage meat trade for Europeans because the rapid and enormous development of the local meat trade both in the cattle owning provinces and as an export business to the Southern provinces of Nigeria have taxed all their resources up to the present...If there were statistics easily available of this great commercial but purely native development they would be a legitimate source of pride to any community...It is because Nigeria as a whole is benefiting so greatly from the efforts of the Fillani stock owners and of the Hausa and Yoruba cattle traders that there is little margin left to swell the totals of the

African Ranches and cold storage meat trade..'(cited in Dunbar 1970:119).

European ranching and the Fulani

While the Administration's efforts were at first geared towards raising revenue from the Fulani cattle herds, some private entrepreneurs meanwhile sought to set up commercial ranching in the Fulani grazing lands of the northern region. It was a European commercial venture - African Ranches Ltd. - that was being referred to by the official cited above.

Commercial sales of cattle had been initially attempted by the Shehu (traditional ruler) with the assistance of the British Resident in Kano, when in 1912, some cattle and sheep were sent on the newly-opened railway for sale to Lagos, and a 90% profit was recorded (Dunbar 1970).

In 1914, a private ranching company was founded in Bornu province of northern Nigeria, within the grazing lands of the Fulani. We have noted already that the one of the company's early pioneers introduced the first cash market for cattle in the north, in collaboration with a local tax collector. African Ranches Ltd., a British-owned ranch, was intended to supply the domestic British market with beef, but failed to gain sufficient land from the Government which remained sceptical of the benefits of private ranching over indigenous Fulani cattle-raising, and protective of Fulani land rights. The ranch was closed in 1923 at the depth of an economic depression when cattle were being sold for a few shillings in comparison to prices of £10 for a steer several years' earlier. No new private ranches were implemented during the colonial period in Nigeria; although a number of government livestock improvement schemes on ranches were established, none of these apparently contributed to increased livestock production and offtake (Dunbar 1970).

The effect of cattle tax on sales from 1930 to 1950

The cattle tax was a major impetus for Fulani sales of cattle. In theory, the rate was supposed to represent 10% annual profit on pastoral herds. It was calculated in 1939 that based on an average herd of 20 head, (excluding calves) in Sokoto Province, a Fulani family would need to sell 2 bulls each year to meet the tax requirement tax of £2 at 1939 prices (Forde and Scott 1945).

However, the sale price of cattle fluctuated quite widely in different years. In the period from 1928 to 1939, the depression of 1931-34 resulted in a drastic lowering of cattle prices in the north (Table 2). As we have seen, the government attempted to take these fluctuations into account by adjusting the tax rate. Nevertheless, annual changes in the sale value of cattle were not reflected in annual shifts in the tax rate.

Stock prices dropped more sharply than prices of cash crops, in the 1930s depression (Forde and Scott 1946). A study of herd compositions made in Gwandu District, Sokoto Province (Sharwood Smith, 1933 unpublished; cited in Forde and Scott 1946), showed that sales of stock by Fulani appear to have been equal to or rather greater than stock increase in 1933. Concerned officials noted that at the tax rate of 2 sh. per head, total tax on Fulani herds represented between 12% to 21% of herders' gross income (Okediji 1972). At this time, Fulani had resorted to growing grain for sale and keeping smallstock, in order to meet *jangali* payments (Forde and Scott 1946). Tax evasion also increased, as did emigration of Fulani to the French territories to avoid the cattle tax (Okediji 1972). As a result of these reactions, the tax rate was lowered to 1sh. 6d in 1933. The rate was raised twice again, in the next few years, as officials reported that veterinary control of disease had lowered mortality and that cattle prices had again risen.

The importance of the cattle tax to the Native Administration is indicated by the fact that 26.5% of revenue for Sokoto Province was derived from this source, in 1933, from a taxed base of about 5 million cattle, and likewise contributed 29% of the revenue for Bornu Province (Forde and Scott 1946).

Table 2: Prices of full-grown bulls in Northern Nigeria 1928-39

1928	£3 - £7	(a)
1929	£3 - £6	
1930	£3 - £4 10sh.	
1931	£1 15sh - £2	
1932	£1 5sh - £2	
1933	£1 15sh - £2 10sh	
1934	£3 10sh - £4 15sh	
1935	£4 15sh - £6	
1936	£6 - £7 10sh	
1937	£4 - £6	
1938	£2 10sh - £4	
1939	£1 8sh	(b)

Sources: a) Okediji 1972: 127
b) Forde and Scott 1946

All commentators reported widespread tax evasion; for example, the Government Livestock Inspector St. Croix (1944) described all the tactics Fulani pursued to avoid paying cattle tax (also Stenning 1959). It was estimated that the number of cattle on which tax was evaded was between 25-50% above the number on which tax was paid.

It is evident that the rate of cattle tax was adjusted by the British authorities in line with an assumed rate of disposable (saleable) surplus from Fulani herds, according to price fluctuations in the sale value of cattle. Thus when local officials reported that the tax rate was not permitting herd growth, or even causing some pastoralists to leave the country, the rate was lowered.

Veterinary measures affecting the cattle trade

Just before the British conquest of northern Nigeria, Fulani cattle herds had been decimated by the rinderpest epizootic which lasted from 1887 to 1891 (St. Croix 1944). Losses of cattle were so great that many pastoral Fulani were forced to settle and take up farming, or to migrate out of particularly badly affected areas of northern Nigeria; consequently the pastoral proportion of the Fulani declined (Hopen 1958, Stenning 1959). Rinderpest continued to cause losses and broke out in two more epizootics in 1913-14 and 1920-21; even by the 1940s, Fulani claimed that their herds had not recovered to the level preceding the 1913 outbreak (St. Croix 1944). Fulani herd sizes in the 1930s and 1940s ranged between 10-30 head, whereas herds of several hundred head in the late nineteenth century were said to have been quite common (Forde and Scott 1946). By the 1950s and 1960s, average herd sizes had increased from this level in the better-favoured areas, but varied according to pasture and marketing conditions (Fricke 1979).

Veterinary inoculations against rinderpest and other major bovine diseases were started by the Veterinary Department of Nigeria in 1925 (Forde and Scott 1946). Two years later, some 95,000 cattle were being inoculated annually against rinderpest (Baier 1980). The campaign against rinderpest was a major activity of the Veterinary Department in northern Nigeria and their measures, which included mobile inoculation camps moving with the Fulani, brought rinderpest within the Fulani herds under control (Walker 1981). According to St. Croix, a senior veterinarian in Nigeria, in the case of rinderpest 'preventative inoculation by the Veterinary Department ...quickly became popular, and within a few years this scourge of the Fulani was under control' (1944:6).

Control of the tsetse-borne trypanosomiasis was more difficult, and no effective prevention was attempted until 1954, when the Veterinary

Department began using insecticides to control tsetse fly, beginning at the southern edge of the savanna zone (Walker 1981). Although most grazing areas of northern Nigeria were free from tsetse fly and Fulani herders took care to avoid tsetse zones in their migratory cycles (St Croix 1944), the disease greatly affected trade cattle being sent southwards to the principle markets (Shaw and Colville 1950). By the 1940s, some eighty percent of cattle mortality was still attributed to rinderpest and trypanosomiasis, but with the latter a more common cause of mortality (Forde and Scott 1946).

In 1934, an order was made from the Native Administration of the northern region to control movement of trade cattle into and through Nigeria. At that time, an estimated 123,000 trade cattle crossed into Nigeria from the French territory to the north. The Veterinary Department responded by establishing 28 control posts and 22 inspection stations, at which cattle were vaccinated against rinderpest and sometimes bovine pluero-pneumonia and blackwater (Annual Report 1936). Through mass immunisation and supervision of trade cattle movements both internally and cross-border through issuing of permits, the influx of major bovine diseases from neighbouring states was likewise brought under control, and as a result of these measures the cattle population had shown a steady increase (Jones 1946).

However, the beneficial effects of disease control on herd growth following the great losses due to rinderpest earlier on, were countered by the rate of cattle tax during the 1930s and 1940s, when sales from Fulani herds were said to be equal to or even greater than the rate of natural increase (Forde and Scott 1946). Rinderpest control succeeded in preventing major outbreaks within Nigerian-based Fulani herds, but cattle continued to cross the border as trade animals or as part of Fulani migratory movements. In 1962-63, a new initiative against rinderpest was mounted, involving a number of west African countries (Walker 1981). This programme was so effective that by 1965, it was claimed that the disease was finally eradicated in Nigeria (Ferguson 1967, Walker 1981). Sadly, however, a new and major outbreak occurred in 1983-84, causing hundreds of thousands of cattle fatalities (Baba 1987).

Throughout the colonial period, the Veterinary Department played a key role in directly and indirectly promoting the cattle trade from the pastoral north to the non-pastoral south. Although according to formal policy, the Department was only responsible for animal health (Walker 1981), in practice the Department was also involved in many aspects relating to the commercial exploitation of livestock and their products. Their activities included collection of statistics on local slaughter and traded cattle at various sites throughout the country, initiating the country's first industrialised dairies (using milk from Fulani herds), promotion of improved processing techniques for hides and skins, experiments in improving animal feed and breeds, and improvements to traditional cattle trek routes. Indeed, the Veterinary Department came under criticism by the first Livestock Mission in 1948-48 for its wide-scale involvement in non-veterinary matters (Shaw and Colville 1950). The former Chief Veterinary Officer for Northern Nigeria, (D.A.W. Walker), who was later to become the first Director of the Federal Livestock Department created ten years after Nigeria's Independence in 1960, has commented that throughout the colonial period, there was no stated policy for livestock development. Thus, the Veterinary Department had to work on an ad hoc basis with regard to development in this sector - probably since as he notes, it was the veterinarians rather than agricultural specialists who had the greatest contact with the nomadic pastoralists (Walker 1981).

The cattle trade from 1930 to 1950

By the mid 1930s, the Veterinary Department, which dealt with all livestock matters in the country, estimated that 100,000 trade cattle went by road from Kano to south, with an additional 23,500 cattle being sent by train southwards. Some 14,000 smallstock were also traded south by train, plus 80,000 sent by road (Annual Report 1936). Another government source, however, estimated that double this number of cattle (including cattle from the French territories to the north) reached southern Nigeria at this time (Baier 1980). The great majority of the cattle involved in trade were from Fulani herds in the tsetse-fly free zones of northern Nigeria. These cattle were traded to the population concentrations in the southeast and southwest of the country (Forde and Scott 1946, Jones 1946).

In the 1940s, it was reported that the main bulk of cattle were purchased between Sokoto and the north central regions of Kano and Zaria. About 100,000 cattle were trekked per year from this region to Ilorin (the great entrepot in Yoruba land) plus 45,000 railed direct south. It seems as if a greater number of cattle were being sent by train by that time. The trade from the north to the southeast was comparatively small, estimated at around 41,000 cattle in 1943 (Jones 1946).

We have a fairly detailed description of the trade to the southeast from a study made by Jones (1946). This trade opened up only after the First World war when the eastern area came under British control. Hausa dealers, with some Kanuri and Shuwa Arabs from Adamawa and Bornu provinces, were looking for outlets for Fulani cattle from the east highlands. After searching for markets in different locations the traders finally settled on Umuahia on the eastern side of the Ibo population concentration. The depression between 1925-35 affected the trade, but trade was building up after 1938, doubling the volume of trade cattle to Umuahia from 20,000 in 1938 to 42,000 in 1944. Dealers bought through sub-dealers or agents who would buy one or two beasts each from the Fulani. When a trade herd was collected, the dealer then trekked the animals southwards. Prices at Umuahia in 1944 ranged from £3 for an undersized beast to £13 for good animal, while the average sold for between £5-9. Dealers from the French territory returned north with cloth bought from sales of cattle, while dealers from Nigeria returned north with cash and cloth, the proportion in cash increasing in the period of *jangali* tax collection. During the 1940s, traders and butchers in this market all complained of the shortage of cattle and said they could have sold twice as many.

The cattle marketing chain

The marketing chain does not appear to have changed in style since early descriptions from the 1940s (Shaw and Colville 1950). The chain starts with petty traders or itinerant cattle buyers who maintain close contact with the producers, buying one to three head from individual herd owners, sometimes in exchange for household goods (Fricke 1979, Ferguson 1974). These petty traders sell groups of 5-10 head to intermediate buyers, at local markets and large trading centres in the north, through middle men. The intermediate buyers then split up herds, one part for the long-distance trading south, one part for local slaughter. Then long-distance dealers and their agents arrange for transport of stock southwards. A three to five stage chain from producer to consumer is passed, with commissions taken at each stage. Shaw and Colville (1950) estimated that producers received one-third of prices realised by final point of sale in the south, with the consumer having to pay a high price in view of all the transactions along the way. Fricke (1979) notes that demand has for a long time outstripped supply, allowing dealers to charge high prices for meat, by operating price cartels.

The accusation that dealers, through the commission system, create high consumer meat prices is countered by Ferguson (1974), who notes that, for the case of Ibadan butchers (at the end of the marketing chain), for an average markup of between 12-13% on the purchase price of a beast, the butchers assure their customers 'a supply of meat available at a stable price'. The differential between the price of beef in Kano (in the northern producer area) and Lagos, a major consumer area some 700 miles south was 14 US cents a lb. in the 1960s.

Fulani dependence on trade during the colonial period

The burgeoning demand for meat in the south had prompted, as we have discussed, Hausa traders to respond by increasing the supply of cattle southwards. At the producers' end of the marketing chain, agents of northern-based Hausa traders made individual contact with pastoral Fulani camps in the wet season. This was the time when *jangali* (cattle tax) was collected, and when nomadic movements were curtailed. The agents would bring 'inducements' of salt, beads, cloth, food items and cash which, after much bargaining, were exchanged for cattle with the Fulani, who, knowing that tax had to be paid, were willing to sell (Okediji 1972). Fulani men would also bring livestock to the Hausa markets, where again after much bargaining, their animals were sold for local consumption (Smith 1962).

Two accounts of the pastoral Fulani economy during the late colonial period of the 1950s discuss the degree of livestock trade by pastoral Fulani; one study of Fulbe ('cattle' or pastoral Fulani) in the western Sokoto Province of northern Nigeria (Hopen 1958) and the other of WoDaaBe (pastoral Fulani) in Bornu, in the eastern section of northern Nigeria (Stenning 1959).

Both studies emphasise the extent to which pastoral Fulani were integrated into the market at that time. In Sokoto, Hopen writes that; 'The economic interdependence between individual pastoral households and the Hausa in general is infinitely greater than between any two pastoral households' since the Fulbe depended on the sale of milk to the Hausa for their staple food, which was grain, not milk (1958:151). Cattle were 'irregularly' sold to Hausa butchers by Fulani, for purchasing grain and to meet costs such as marriage, cattle tax, purchase of clothing, household equipment, medicine, fines, and wage labour for farming. Although Hopen describes the sale of cull animals - old, diseased, non-serving bulls - to Hausa as required for meeting 'occasional emergency expenses', the types of expenses listed above would normally occur quite regularly. Indeed, later in the same passage, Hopen remarks that 'practically all the items they use and consume are acquired through markets' and that the list of purchased goods in the typical pastoral Fulani household shows 'how important trade is in their economy' (1958:151-152).

In the case also of the WoDaaBe of Bornu, it was noted that for their regular supply of grain and other recurrent needs, families relied on the sales of milk by women, at the village markets. Their production system was summed up as 'a herd-owning and milk-selling enterprise' (Stenning 1959:108) comparable to that of the Fulani in Sokoto about whom Hopen had noted that 'theirs is a dairy industry' (1958:152). For the WoDaaBe, sales of cattle took place only when there was a pressing need for cash, to pay tax, to pay for inoculation fees and to buy grain in bad dry seasons. The form of trade varied according to the season; during the wet seasons, camps were made near to villages where women could sell milk, while at the end of the dry season, when milk was scarce, the majority of families had to sell cattle or sheep to buy grain.

The importance of Fulani livestock to the local Hausa economy was indicated by the dominance of Fulani dairy sellers and Fulani livestock in local Hausa markets in the 1950s. Smith notes that '...large herds of Fulani cattle ...provide the meat and dairy supplies which the Hausa need but do not themselves produce' (1962:301) and later that 'no Hausa market is complete without an ample supply of fresh meat for sale; and beef, the preferred form of meat, is only available from Fulani nomads' (1962:307).

Fulani dairy marketing and development of a dairy industry

Parallel to the expansion of the trade in live cattle from Fulani producers was the development of a commercial dairy industry during the colonial period. As was discussed above, pastoral Fulani were primarily dependent on the sale or barter of milk and dairy products for their subsistence (in the form of grain) and other household requirements (St. Croix 1944, Hopen 1958, Stenning 1959). According to these observers, the income from dairying, which was entirely under the control of women, was expected to provide the family with all its daily needs, while sales of cattle, controlled by men (though customarily also with the consent of wives) were expected to provide for larger, single cash expenditures of which payment of cattle tax was perhaps the major annual component.

The relative value to a pastoral Fulani household of dairying compared to sales of cattle was estimated in the 1930s on the basis of an average Fulani herd of 20 cattle. The value of stock sales was £2 12sh., which would have been used to pay the cattle tax, while the value of dairy products was estimated at £6 10sh. of which perhaps half was realised through sales (Forde and Scott 1946). By the early post-independence period, it was calculated that dairy sales income from Fulani herds on the Jos Plateau to the higher-income town dwellers yielded about four times the annual cash income obtained by selling mature males from the herd (Fricke 1979).

Realising the commercial value of milk from Fulani herds, and in view of the high cost of imported butter, the Veterinary Department set up small milk collection units in northern Nigeria in the 1920s (Waters-Bayer 1988). Later, two dairies were built, at Kano and at Vom on the Jos Plateau, in the early 1930s (Annual Report 1936). The dairy business was expanded by the United Africa Company, which began buying butter from Fulani pastoralists from up to one hundred collection points around Jos, Zaria and Kano in the 1940s. Eventually three full-scale dairies at Vom, Jos and Kano, were producing butter, ghee and some cheese until the end of the colonial period (Fricke 1979, Forde and Scott 1946). Up to the 1950s, the dairy industry was orientated towards exports (to Britain) and to meeting European demand within Nigeria. The Second World War particularly stimulated domestic demand, due to restrictions on imports to Nigeria (Waters-Bayer 1988). However, following Independence, the main dairies were forced to close down as market and pricing factors rendered large scale dairy processing uneconomic.

The entire supply of milk for these dairies was obtained, during the colonial period, from Fulani pastoral women at prices up to seven times higher than the local market sale price for Fulani milk (Forde and Scott 1946). Given these very attractive prices, and the fact that the dairies continued their operations until after Nigerian Independence, it is not surprising that according to Fricke, the opportunities for selling milk to the dairies on the Jos Plateau had 'contributed in high degree to the concentration of cattle-breeding Fulani on the central Plateau since the end of World War II' (1979:207). Although Waters-Bayer (1988) questions whether prices offered by dairies were always higher than local market prices, the fact that these dairies were able to expand their production based on sales of milk from pastoralists over a period of some 30 years (Fricke 1979) suggests (as do the Fulani women informants in her study) that the dairy prices were at least attractive to pastoralists.

Commercial offtake and herd composition from the 1930s to 1960s

Much debate in the literature on Fulani livestock has been generated around the question of the commercial offtake rate. This has been in Nigeria, as elsewhere in Africa where the pastoral livestock sector is a significant source of production, revenue and export earnings for the nation, viewed as an indicator of the actual and potential contribution of the pastoral sector to the national economy. Others have also viewed the offtake rate as an indicator of pastoral economic welfare. Thus it is frequently assumed that the higher the offtake rate, the greater contribution being made by pastoralists to the national economy and the greater benefit accruing to their own welfare - these two benefits often being seen as directly related.

One author who has attempted to correlate all the available data, which had varying degrees of reliability - cattle tax figures, veterinary records, exports of hides and skins, slaughter rates and sample herd surveys - has noted the wide range of offtake figures produced from these sources over the years (Ferguson 1967). Thus, estimates of Fulani herd offtake from 1950 to the 1970s varied by more than 100%, ranging from a low of 5.2% to a high of 10.7%. The offtake rate is used here to refer to cattle leaving a herd through sale or local slaughter. In the past, as now, discussion of offtake rates among pastoral herds was often coloured by the prevailing different views of pastoralists. The earliest attempt to measure offtake from Fulani herds was a small study made in Sokoto in 1933 (unpublished, cited in Forde and Scott 1946). This study found that according to herd biological indices (mortality rates, calving rates and growth rates), and given the typical age of sale, Fulani herds at that time were growing at 11% per year, while sales rates were also 11%, implying zero herd growth. Since the great majority of Fulani sales at that time were for paying the cattle tax, these results had political overtones; the author of this study suggested that in some cases, not only could Fulani herds not grow, but the enforced offtake rate was causing negative herd growth. Forde and Scott (1946) note in passing that this study's findings were criticised, since the implication was that the cattle tax was having damaging effects on the Fulani economy. Moreover, some authorities believed that pastoral Fulani were not selling at sufficiently high rates.

One of the principal influential statements that the Fulani were resistant to selling their cattle was made by the authors of the Nigerian Livestock Mission sent by the Colonial Office to report on the livestock industry and to investigate whether the industry could be built up into an export meat trade to Britain (Shaw and Colville 1950). In this report, discussion of Nigeria's main livestock producers is under the heading 'The problem of the Fulani' in which the main concern expressed is that Fulani have 'to settle and to sell' (1950:39) in order to increase output of meat for the rest of the country. The 'problem' of the Fulani and a possible solution was presented as being:

> 'To break down more rapidly their traditional aloofness to economic response and so induce either their settlement or their readier sale of cattle ...more attention should be given to educational propaganda...[A British administrator was praised for having] 'employed his Sundays...in giving lectures to the Fulani over a wide range of agricultural and social subjects, interspersing the matter with a musical programme from the B.B.C. ...Demonstration from advertisements in magazines to show the wide range of household goods that could be made available to them, accompanies all lectures and talks, and is aimed at stimulating their appetite and ambition' (Shaw and Colville 1950:39).

Nor, however, were Government-inspired studies the only perpetrators of this viewpoint. The respected ethnographer of the Fulani (WoDaaBe) in the 1950s, Derrick Stenning, has been criticised for presenting the 'enduring cliche of the irrational and uneconomic cattle husbandry of the Fulani, without, however, examining the material or carrying out his own investigations' according to Fricke (1979:126). Unlike his French contemporary Dupire, the ethnographer of the pastoral Fulani in Niger, Stenning did not focus attention on the marketing patterns of the Fulani he studied.

Retrospective interpretation of the available data on Fulani herd compositions since the 1930s has led to the view that the Fulani were, after all, selling as many animals as they could, since records were kept.

> 'It is striking how emphatically all these figures [on herd composition] contradict the generally held conceptions of extremely unfavourable herd compositions' (Fricke 1979:127).

Various studies were made of Fulani herd compositions throughout the colonial period, in different parts of northern Nigeria. From the earliest study in 1933, to 1954, it was found that while in some cases, a fraction of the herd consisted of male cattle over 3 years of age, (ranging from 6% to 10% in four out of six studies) in two of the six studies there were no males over 3 years of age. Likewise, infertile females were either not found in herds, or in three of the six studies, constituted a maximum of 4% of the total herd (Fricke 1979). Moreover, within these herds a certain number of adult males had to be retained as pack oxen or to serve as bulls. Fricke points out that the data on Fulani herd composition over this twenty-year period is not dissimilar to cattle herds in the Federal

Republic of Germany, and one study of Fulani herds in 1934 virtually approximates herd structures in Germany in 1950 (Fricke 1979).

In the late colonial and independence period, further studies of offtake showed a continuation of the same pattern, which provoked one observer to remark:

> 'The frequent misunderstanding about the economic utilisation of animals seems at least partly caused by negligence of the way in which pastoral [Fulani] herds are composed...with regard to age and sex' (van Raay 1974:5-6).

Two livestock censuses (1965 and 1966) in Katsina Province as well as two surveys by van Raay between 1968-1970 in Zaria and Katsina provinces show balanced distributions of male and female cattle under four years of age. Discrepancies between males and females above this age in the herds, are due to the slaughter and sale of male animals. All four surveys show adult females (4 years plus) ranging between 42-47% of herds while adult males (4 years plus) ranged between 8-11% of herds. Fulani stated that bulls were disposed of by the age of four as their 'meat is sweet' by that age, referring to the quality of the animal and commercial value if sold (van Raay 1974).

Through heroic cross-checking and comparison of the available data, Ferguson was able to present an estimated annual offtake rate over a fifteen year period, from 1950-1965. The lowest rate during this period was 6.8% and the highest 8.3%. The result of his analysis led to the 'surprising', and for our purposes, extremely important conclusion that potential and actual marketing from Fulani cattle herds were equivalent. That is, the potential number of cattle available for marketing was equal to the actual number marketed (Ferguson 1967).

A later review of the marketing and offtake evidence for the period from the mid-1960s to the mid-1970s estimated a higher offtake rate of between 9% -10% during this period, due to higher demand and other factors discussed below (Fricke 1979). In reviewing the data on Fulani herd compositions, Fricke concluded that; 'The tendency of the Fulani to sell off unproductive animals, which may be inferred from the composition of the herd, is confirmed by market statistics' (1979:129). Studies of the age and sex composition of marketed cattle from northern Nigeria, from the 1950s to 1960s, show that between 75% and 88% were bulls over four years old, while between 7% and 10% were sterile cows. The remaining portion sold consisted of young bulls and cows, about which the Veterinary department noted in a 1954 report that Fulani would sell breeding age cows with a poor reproductive record (Fricke 1979).

Miscalculation of Fulani pastoralists' marketing patterns has led to expensive planning errors, which however, have tended to reinforce the view of the irrational pastoralist. Ferguson (1976) points out that overestimation of the numbers of marketable animals supposedly retained within pastoral Fulani herds has led planners to overbuild capacity in many abattoirs in the livestock zones of West Africa.

Government policies towards pastoral livestock and cattle marketing

The evolution of policy towards the livestock resources held by Fulani pastoralists falls into two fairly distinct phases. The first phase - raising of revenue - has been summarised as follows:

> 'there was no conflict between the basic aims of the European Administration, acting through the Native Authorities, and the WoDaaBe. The economic and social organisation of the latter was oriented to the maintenance of as large herds as possible. The policy of the former was to ensure the payment of as much tax as possible, levied in theory on each head of stock' (Stenning 1959:92).

Despite early enthusiasm for developing the commercial livestock industry based on the pastoral herds, British official interest waned soon after imposing various fiscal and administrative measures on the pastoral Fulani. Okediji comments on the period up to the Second World War that:

> 'The attitude of the administration towards the pastoral Fulani precluded any innovation for expansion of the trade. There was a widespread belief that the pastoral Fulani were susceptible to no economic inducement...Consequently the evolutionary process of inducing the pastoral cattle raisers to develop the export trade was not encouraged and the expansion of the trade was left entirely to the indigenous people' (1972:230).

The one major effort directed towards the livestock industry (and thus towards the Fulani pastoralists who depended upon their cattle) instituted by the British was the veterinary service and its associated support to trek routes and abattoirs. This has been noted above. Up until

Independence in 1960, the Veterinary Department was active in supporting the indigenous livestock trade, for example sponsoring several new abattoirs, at Kano and Maiduguri, and improving trek routes from the north to the south (Annual Reports 1936, 1959, 1962).

It was not until after the Second World War that a second phase was ushered in, when British colonial policy as a whole was re-orientated towards active development of African economies. This phase is marked by the Nigerian Livestock Mission (Shaw and Colville 1950), which has been described as the 'first blueprint for a complete overhaul of the marketing system' (Ferguson 1967:64). The principal concern expressed in this mission's report was the poor nutritional quality of southern Nigerian diet, (low in protein) and thus the need to increase the consumption of meat in the south. In this, the mission was echoing one of the major concerns regarding the role of the pastoral livestock sector throughout the colonial period in Nigeria. Only a few years before the mission's report, an authoritative study of the entire Nigerian economy had recommended that; 'An increase in the size and quality of the Fulani herds is necessary for the increase in meat consumption which is so badly needed in the south' (Forde and Scott 1946:210).

The livestock mission proposed the establishment of modern factory abattoirs which could buy cattle directly from producers (thus avoiding some of the middlemen) and process the beef (chilled, frozen or dried) for resale to consumers. But such large-scale investments were delayed until the mid 1960s when the feasibility of revamping the traditional marketing system was again investigated. These more recent trends are considered below.

The objectives of the colonial government towards pastoral production in northern Nigeria have been reviewed by Baba (1987), who finds that five aims evolved, either sequentially or overlapping at different points in time. The first aim was 'expropriation of surplus' in the form of the *jangali* (cattle tax) which was explicitly intended to draw off ten percent of Fulani herd 'profit' as revenue for the Native Administrations of the north (Forde and Scott 1946). The second aim, implemented some 20 years after the British gained control, was treatment and control of animal disease. The third aim, most forcibly expressed in the Livestock Mission report of 1950, was to push the pastoral Fulani into commercialising their production. This aim, notes Baba, was in line with the fourth strategy, that of settling the more nomadic pastoral Fulani in order to exert greater administrative control (which Baba refers to as trying to 'fully encapsulate' the pastoralists). The last aim, which only began to be implemented in the late colonial period, was to introduce 'improved' management such as grazing reserves and supplementary feeding.

To this list, we would add several other colonial policies towards the pastoral livestock sector, which are outlined in this case study: to expand the distribution of meat and dairy products from the north to meet consumer demands in the south and to support the profitable export trade in hides and skins. It is also noteworthy what the British administration *did not* attempt to do, as compared to the policies towards the pastoral livestock enacted in other parts of British Africa. There was apparently no intervention in the operations of the traditional marketing systems, managed by Hausa merchants and traders, and there was no attempt to tamper with market forces through price controls or quotas. Moreover, the deliberate policy of disallowing land alienation to European prospective ranchers (with one exception which was viewed as an experiment), prevented any economic or political competition over the livestock trade between pastoralists and commercial ranchers, which had in other parts of colonial Africa, been to the disadvantage of pastoralists.

It was no doubt the very lack of official intervention in the livestock trade as a whole that encouraged the expansion of the indigenous livestock trade - this is acknowledged by many modern Nigerian researchers on the topic.

Two key elements of the colonial policies towards the pastoral livestock sector have persisted in the post-Independence period; sedentarisation and commercialisation (Baba 1987), since as another Nigerian observer has remarked:

> 'the primary objective of government had always been to increase livestock production and thereby make more beef and dairy products available to the Nigerian population, particularly urban consumers' (Gefu 1988:24).

Cattle sales 1960s to 1980s

Sales of livestock from northern Nigeria at the end of the colonial period are recorded by the Veterinary Division of Northern Nigeria (Annual Reports 1959-60, 1962). Their reports gave a 'conservative estimate' of the value of the trade as between £20-25 million (1962:12). The volume of cattle exported from Northern Nigeria in 1959-60 to the south was 322,000, of which more than half went by rail.

Veterinary reports showed that the preponderance of the trade originated in Bornu and neighbouring foreign states around Lake Chad. A total of 124,000 cattle were traded from Bornu itself in 1959, compared to 45,000 from Sokoto. The estimated off-take in Bornu fell to 8.6% in 1959, 'its lowest in five years' but export of cattle and offtake was rising in Sokoto (Annual Reports 1959-60, 1962). In addition to cattle traded southwards, some one million cattle and about seven million smallstock were slaughtered within the northern region, at that time.

Compilation of official statistics on numbers of cattle traded southwards and slaughtered in the northern Nigerian states indicates that by the mid 1960s, more than half a million cattle were being sold from herds (Ferguson 1967). Northern Nigeria provided about 60% of the total marketed cattle within Nigeria as a whole (excluding cattle sold in Nigeria originating from Niger and Chad).

By the 1970s, the number of animals offered for sale by pastoralists in Northern Nigeria was still highest in Bornu (220,000 local and 64,000 imported trade cattle in 1974), followed by Sokoto (Fricke 1979: 250). The Kano region held the leading role for cattle transhipment south up to 1975. Cattle imported for sale into Nigeria rose from 226,000 in 1962-63 to 320,000 in the mid-seventies drought period in the Sahel, but then fell back again rapidly to 139,000 in 1975. The main importation was from Niger, and also from Benin, Dahomey, Chad and Cameroon between 1966-76.

Changing demand, supply and price structure, 1960s - 1980s

From the 1960s onwards, there has been an increase in the cattle population and thus in available supply to the market, through sales of cattle (Fricke 1979). An increase in the cattle population of northern Nigeria has been estimated over a twenty-five year period beginning in 1938 as being between 1% and 1.5% per year, with an associated rate of increase in marketed cattle of 1.5% per year over the same period (Ferguson 1967). Most commentators, from the time of St. Croix (1944), ascribe this increase in the cattle population to the veterinary improvements and consequent control of diseases. For example, Ferguson found that; 'The Fulani are loosing their old fear of a herd depleted by disease, and more young males and marginal cows are being marketed each year' (1974:11).

The types of animals mainly being sold by Fulani in the 1960s still tended to be older bulls and steers between 4 to 10 years old. Veterinary records from the mid 1950s showed that 88% of cattle offered for sale were bulls, of which 70% were four years old or more (Fricke 1979).

There was a commercial premium on these beasts, since being more mature and rangy, they could better survive the long journeys south to the consumer markets. Moreover the Nigerian consumer market did not value fat meat (which sold at a lower price per lb.) preferring tougher lean meat which could be used for soup stock and flavouring. Furthermore, cattle were sold by weight since all parts of the beast were consumed, including bones (Ferguson 1967). Indeed, such is the particular demand structure for beef cattle in Nigeria that Ferguson warns:

> 'Before starting any review of meat marketing in Africa, it is best for an American or European to forget all he knows about meat cutting, meat quality and familiar consumer preferences' (1967:49).

The decade from 1960 to 1970 witnessed another great increase in demand for meat within Nigeria, with imports of cattle from north to south increasing by 60% in this period. This rise was mainly due to an increase in the urbanised southern population, which was better educated and enjoyed higher average incomes than the northern population (Fricke 1979).

The Nigerian oil boom, which took off after 1970 and peaked in the early 1980s, created a massive increase in demand for livestock products, to which northern Nigerian pastoral producers responded. During this boom, the economy grew at perhaps a rate of 6% per year, while non-agricultural employment may have increased by 10% per year; demand for meat and dairy products expanded among the new well-off urban middle class (Baba 1987). Despite the flood of imported food made possible through oil earnings, some of the increased demand was met by an increase in domestic livestock production. Citing World Bank data, Baba (1987) notes that demand for livestock products grew at more than 5% per year, while FAO data indicates that domestic meat and milk production grew by 5% and 9% respectively between 1971-81, as compared to 3% and 4% in the previous decade. Following the collapse of the oil boom, growth rates for meat and milk production in the 1980s dropped well below the pre-oil boom level of the 1960s (Baba 1987). One study of the cattle trade in northeast Nigeria found a threefold increase in cattle being sold by Fulani as well as Shuwa pastoralists from 1977 to 1981, the peak period of the oil boom (Alaku and Igene 1983).

If the oil boom had stimulated Fulani pastoralists and the livestock traders to partially meet vastly increased demand through supplying more livestock and livestock products, there should have been a noticeable change in marketing patterns. Over the decade of the 1970s there was apparently a large though temporary increase in the sales by producers of cows in calf as well as immature and aged cattle. These cattle were mainly sold for the northern slaughter market, since they would be unable to withstand the treks southwards (Fricke 1979). However, it is likely that displacement occurred, whereby some of the prime male cattle formerly slaughtered for the northern market were diverted southwards to meet the increased demand.

Another reason for this temporary increase in sales of non-prime animals was the 1973-77 Sahelian drought, which coincided with the rise, already noted, of demand for meat among southern Nigerian consumers. Thus, while the drought forced herders to sell off a portion of their breeding stock as well as males which had not fully matured, there was also a fourfold rise in the average price for slaughter cattle from 1974-1977 (Fricke 1979). Although food prices were also rising rapidly in the same period, cattle prices were rising faster, while the price ratio of grain to milk had simultaneously turned against the pastoralists. The value of milking cows would accordingly have declined. Thus, pastoralists were not only forced to sell other types of cattle apart from mature males, due to the drought, but they also had a price incentive to do so. There is a hint (unsubstantiated) in Fricke (1979) that pastoralists were more willing to sell immature males given the high prices, rather wait for males to mature on the range, with the associated risk and effort for a marginal price increase.

The role of the cattle tax (*jangali*) in forcing Fulani to sell cattle should be reconsidered in the modern period, since the tax was first abolished in 1975, in the middle of the oil boom decade. Since the tax has been sporadically re-instated and abolished since 1975 as revenues from oil declined (Baba 1987), the effects of its presence or absence on sales patterns since the 1970s are difficult to pinpoint.

Summary

One of the authorities on livestock marketing in West Africa has described the Nigerian livestock marketing system as:

> 'one of the most remarkable examples in the developing world of a large-scale, completely indigenous marketing system. Operating across international boundaries, it is a multi-million pound industry that involves thousands of persons and hundreds of thousands of cattle. Government regulation of the trade is limited

> almost entirely to the requirements for health certificates and regulation of trade routes. Many cattle routes and markets in use today existed before the colonial period...' (Ferguson 1967:12).

Without the hinderance of government constraints, Fulani pastoralists throughout the colonial and post-colonial period marketed all the animals which they could do without. They were induced to market their animals in part through the imposition of a cattle tax, while offtake from their herds could be sustained through the control of livestock diseases by an active veterinary department. But successful marketing of Fulani cattle continued to depend on the network of non-Fulani livestock traders - as demand increased over this century, due to economic and demographic changes in the southern non-livestock producing zones, livestock traders were able to respond by trading more cattle supplied by Fulani producers. Moreover, marketing levels were responsive to price levels; as prices rose in the 1970s oil boom years, more and more pastoral livestock entered the market.

The case of Nigeria therefore illustrates the positive role which can be played by government in encouraging livestock marketing. It also illustrates a strong demand-led type of livestock marketing system, in which producers were able as far as possible to respond to demand.

5
The Pastoral Fulani of Niger*

Introduction

The WoDaaBe Fulani have been described in the past as being the most highly specialised among West African pastoralists. Their nearly exclusive concentration on livestock meant, however, that they have had to rely on exchanging or selling livestock and their products to obtain items not derived from their herds (Dupire 1962a, Swift 1984, Bonfiglioli 1988).

The WoDaaBe belong to the Fulfulde-speaking group referred to generally as Fulani, or Peul in Francophone West Africa. They refer to themselves as WoDaaBe in Fulfulde, but are also known by other tribes and outsiders as the Bororo (Sutter 1982). The WoDaaBe are relative newcomers in Niger; between 1890 and 1920 their population in Niger consisted of no more than several thousand domestic units (Bonfiglioli 1988). In the early 1950s, Dupire estimated the total number of WoDaaBe to be less than sixty eight thousand, accounting for almost one third of the Fulani and about 3% of the total population in the French Territory of what is now Niger (Dupire 1962a). According to a recent estimate, WoDaaBe in Niger now number around one hundred thousand, concentrated between the valleys of Azawak and Azar, north of Ader, and in Damergu and Manga (see Map 3) (Bonfiglioli 1988).

Although Fulani pastoralists migrated in large numbers into Niger only quite recently, they quickly became important suppliers of cattle to the long-established and extensive pre-colonial livestock trading system (Baier 1980). However, the first detailed study of WoDaaBe in Niger, in 1951, then indicated that the WoDaaBe pattern of cattle sales was not market-oriented, in that the timing of sales did not coincide with the peak demand and price season for cattle (Dupire 1962a). But in recent decades, the relation of WoDaaBe to the market has changed in several ways. New sales patterns have developed which suggest that WoDaaBe have become not only more integrated into the market but also more

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* This section was written by Desirée Dietvorst and Carol Kerven

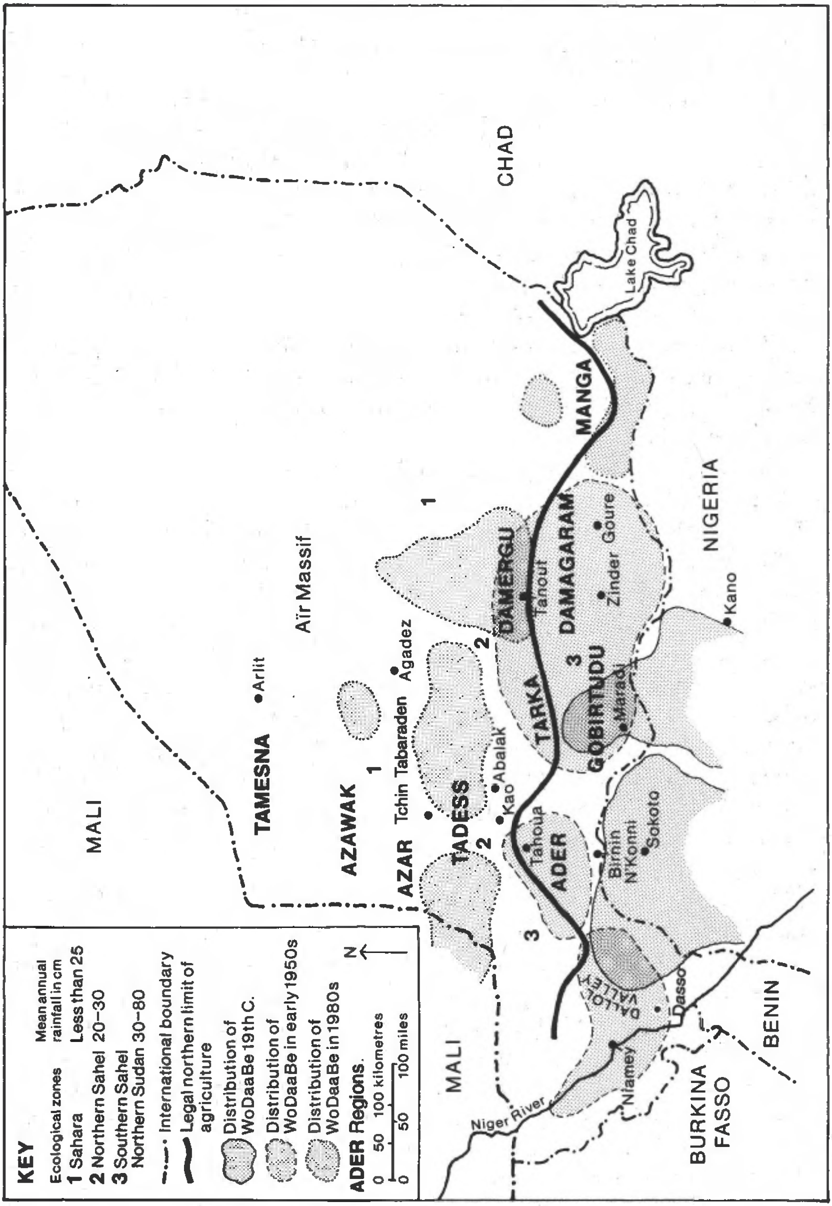
market-oriented and have adjusted their production strategies accordingly. Observed changes in the WoDaaBe economy, especially with respect to patterns of livestock sales and cereal acquisition, provide considerable support to such a contention.

According to some observers, the WoDaaBe became more dependent on the market mainly as a result of the 1968-72 Sahelian drought (Sutter 1979, Swift 1984, White 1987). They note the combination of factors which has led to this apparent increased dependence, including the expansion of agriculture and in consequence reduced access to pastures, and the drought of 1968-72 itself which led to severe livestock losses; together these brought an overall decline in WoDaaBe herd sizes by the mid 1980s (White 1987). Smaller herd sizes have meant reduced milk availability, which according to these studies has increased the importance of cereals in the pastoral diet, while at the same time reducing the opportunity for the dairy-cereal barter and thus augmenting the need for animal sales (Sutter 1982, Swift 1984).

However, over approximately the same time period, there has been a shift of markets northwards and into the pastoral zone, as livestock traders sought to meet the steadily growing demand for beef in Nigeria by moving closer to the sources of production, purchasing more animals and offering higher prices (Dupire 1972, Bonte 1965). Thus, as the head of the cattle marketing chain has moved high into the pastoral production areas, it is very likely that the WoDaaBe have become more market-oriented, as well as more market-dependent. The changes in livestock sales patterns and cereal consumption may therefore be due, as much to better marketing opportunities as to enforced contractions in herd sizes. For the past, the minimal market orientation of the WoDaaBe, as described by Dupire during the 1950s, may have been a consequence of lack of opportunities, as much as it was related to WoDaaBe's reported resistance to commercialising their stock.

We consider first the pre-colonial livestock trading system into which Fulani pastoralists were incorporated during the last and present century. The expansion and redirection of livestock trading that followed the French conquest, together with other administrative measures, brought further integration of Fulani pastoralists into the market sphere, particularly with regard to livestock sales. We then discuss the evolution of the export livestock trade and the corresponding changes in the livestock marketing structure, in response to growing demand for beef in Nigeria. WoDaaBe patterns of animal sales, grain purchases and herd structures are then examined in the light of the changing structure of livestock marketing in Niger between the 1950s and 1980s.

Map 3: Pastoral Fulani in Niger



Pre-colonial trade

For centuries the area now known as Niger was at the core of the trans-Saharan trade; the area itself spanned two major production zones - the desert and the savanna - and at the end of the 19th century, the principal trading network was to the north, connecting the Mediterranean port of Tripoli to Kano in present-day northern Nigeria.

Tuareg dominated the northern end of this trade network, while Hausa controlled trade from the desert-savanna frontier southwards towards the forest zone (Lovejoy and Baier 1975). Livestock provided an important element of trade. In the case of the Tuareg-dominated northern trade, animals other than camels could not be moved across the desert and thus apart from occasionally supplying camels to the caravan trade, livestock trade by Tuareg was restricted to animal by-products in the form of the so-called 'Morocco' leather items manufactured in Kano. This was a low volume and high-priced luxury item which could easily be transported northwards across the desert.

To the Hausa-controlled southbound trade, Tuareg supplied cattle, including pack oxen, sheep for meat and goats for the leather tanning industry. The Tuareg seasonal transhumance patterns brought them well within the sedentary states along the desert edge (just north of present day Nigeria), and animals were sold in markets located along livestock trails. Tuareg depended on the Hausa for many of their consumption needs including grain and cloth, and the income needed to purchase these was largely derived from animal sales (Lovejoy and Baier 1975). The live animals obtained by Hausa traders from the Tuareg pastoralists in the north could be transported southwards from the Sahel to the savanna areas of northern Nigeria, due to the more favourable climatic conditions. Transactions in this commercial network were mainly conducted at village level or in the bush rather than at regular markets, and directly between seller and buyer, without the use of an intermediary (Kimba 1906 in Bellot 1983).

In the region at the heart of this trading network - Damagaram in central Niger - there was a gradual influx of Fulani pastoralists during the second half of the 19th century. They came from Hausaland in present-day Nigeria, south of the Tuareg-dominated territory in modern Niger, where they had been dispersed between the Niger river delta and lake Chad basin (Bonfiglioli 1988, Dupire 1972). The Fulani immigrants from the south were attracted to the Damagaram region by prosperous and peaceful conditions established by a strong local ruler, who combined personal investment in trade with military strength achieved through the importation of European firearms, which made the region flourish (Baier 1980).

WoDaaBe Fulani did not migrate to central Niger until much later, after the imposition of French rule; by the end of the 1890s, WoDaaBe were concentrated in the borderlands between Niger and Nigeria, roughly in what is now Sokoto state in north Nigeria and Dosso Arrondissment in southwest Niger (Bonfiglioli 1988).

Although much of the livestock trade was incorporated in the commercial networks of the long distance trade, animal trade-networks also existed alongside and independent of the trans-Saharan trade. Regional networks between pastoral and agricultural economies developed where nomads came into contact with their sedentary neighbours, and were almost exclusively an exchange of millet for animals. Currents of livestock trade extended in particular from the desert to the savanna and from the savanna to the forest.

In Damergu, in central Niger, livestock trade between desert and savanna was carried on by sedentary Hausa traders who travelled north to Agadez in the dry season, where they met with Tuareg herders to exchange their millet for cattle as well as some sheep, donkeys, camels and salt. Baier (1980) estimates that between 700 and 1000 cattle plus a fair number of other stock were thus transported southwards each year. Desert-savanna livestock trade elsewhere in the Nigerien Sahel may have been of the same order of magnitude as trade between Agadez and Damergu. Early economic reports of the colonial administration (from around 1910) were in agreement that cattle represented the most important item of southbound commerce; unfortunately none were able to indicate, or even guess, the volume of the trade (Baier 1980).

Savanna-forest networks extended from the borderlands of present-day Niger and Nigeria far south into the forest zone. Their origin may be found in the arrival of Fulani in Hausaland in the 15th century or earlier (Dupire 1962a, Baier 1980). Although information on these pre-colonial networks is scant, evidence of a long-established trade between Fulani and Hausa can be found in more recent studies. For the early 1950s, Dupire (1962a) described the socio-economic relations between WoDaaBe Fulani in present day southern Niger and Hausa middlemen and retail traders based in Nigeria. She found there existed a strong bond, generations old, between these WoDaaBe and their Hausa middlemen as the latter claimed to be the descendants of slaves, of the butcher-caste, who had belonged to Fulani or WoDaaBe families in pre-colonial Hausaland. She notes that 'today they [Hausa] do not practise this [butcher] profession and limit themselves to buying and selling' (Dupire 1972:349).

Initial impacts of the French conquest

From 1896, French expeditions started to arrive in the country, and military rule was imposed, being replaced by civilian government in 1922. The trans-Saharan trade to the north was disrupted following the flight of large numbers of Tuareg to northern Nigeria after the nationwide Tuareg revolt against the French in 1916. Up until the 1920s, the dominant Tuareg presented a threat to the small and ill-financed French miliary presence, to which the French responded by systematically undermining Tuareg economic and military power, leading to the revolt (Fuglestad 1983, Baier 1980, Bonfiglioli 1988).

In contrast, Fulani, and in particular WoDaaBe, because of their relative small numbers and high mobility, managed to escape colonial interference until the late 1920s. Indeed, Fulani initially benefitted from French occupation in a number of ways. Firstly, the suppression of the Tuareg by the French allowed the Fulani to migrate northwards into formerly Tuareg-held pasture land. WoDaaBe were also able to take advantage of the relative safety created by French occupation. In the early days of colonial conquest the military efforts of the French were concentrated in three regions; the Dallols in the west, Ader in the centre and Damagaram and Damergu towards the east. When the WoDaaBe migrated into Niger, they moved firstly to these regions (Bonfiglioli 1988). At the same time, Fulani were eager to leave their homeland in present-day southwest Niger and northern Nigeria for more northern pastures in order to reduce the threat of rinderpest. During the great outbreaks of rinderpest at the end of the century, effects had been most severe in Hausaland among nomadic herds in close proximity to sedentary herds, and much less so in central Niger.

The Fulani and WoDaaBe made their way northwards to central Niger by gradually extending the span of their transhumance cycle, principally along a south-west to north-east axis, eventually concentrating in Damergu, which became a crossroads for transhumance routes. By 1916 Fulani pastoralists were present in the area in sufficiently large numbers to permit livestock trade on a much larger scale than before. At this time Hausa cattle traders in the area, who had developed the livestock-grain trade with Tuareg to the north in Agadez, found this desert trade route disturbed by the consequences of the Tuareg revolt. The traders then turned their attention to trading with the newly-arrived

Fulani pastoralists, by taking Fulani cattle southwards to the growing Nigerian markets (Baier 1980).

Effects of colonial taxation on livestock trade: 1900-1930

Three forms of early colonial taxation directly or indirectly affected the livestock trade. Direct taxation of the caravan trade added to the decline of the trans-Saharan trade caused by the dispersal of Tuareg after the revolt. The collection of head taxes had an indirect, though strong, effect in that it influenced livestock prices and pastoral supply patterns. Lastly, a market tax on livestock transactions helped to relocate market activities outside the territory.

An *ad valorum* transit tax was imposed by the French on trans-Saharan caravan trade in 1903. Northbound routes were few and had to pass certain watering points in the desert, so that tax could be collected more easily than on caravans moving south which could cross the Nigerian border at many points, making tax collection very difficult. This speeded up the process of diversion of trade to the south. But the steadily increasing flow of export livestock from Niger was, however, quickly stemmed by the establishment of a customs barrier along the border of Nigeria in 1914. Livestock traders who were caught smuggling had all their animals confiscated. As a result, many investors, who could not afford to pay the tax and were unable to bribe officials, were squeezed out of the livestock trade (Baier 1980).

Although the customs barrier was intended to channel some of the surplus into the hands of the French, it had quite the opposite effect in that it retarded the development of commercial production. Producers in Niger were thus denied access to some of the commercial opportunities which would enable them to meet other tax demands discussed below.

The first head taxes were imposed in October 1900, immediately after the millet harvest. Pastoralists, because of their mobility, could at first avoid paying the head tax. This was especially the case for the WoDaaBe, who were not only extremely mobile, but also amounted to no more than a few thousand domestic units until the 1920s (Bonfiglioli 1988). Nevertheless, the head tax did affect WoDaaBe in that high tax rates forced farmers in southern Niger, (also the WoDaaBe homeland at that time), to increase their production of cash crops by rapid expansion of cultivated areas; this created pressure on WoDaaBe to seek new pastures. However, as WoDaaBe began to migrate northwards in large numbers to grazing areas vacated by the Tuareg and began supplying the growing livestock trade to the south, they became more conspicuous to the colonial government - official reports at the time mention 'the Fulani invasion' (Bonfiglioli 1988:126). Realising the loss of potential revenue so far, the government revised the tax collection system at the end of the 1920s, making individual household heads rather than village chiefs or heads of nomadic fractions responsible for tax payment. At the same time, the government adopted much more rigid census procedures, in order to count the taxable population.

Bonfiglioli (1988) describes how the change in taxation policy led to dramatic consequences for the WoDaaBe in Dallol whose herds were forced to the market where administrators sold off the best animals, keeping all the revenue as compensation for unpaid taxes in the past.

From this point on, annual tax payment - which was not abolished until the 1970s - was a strong determinant of pastoral offtake patterns within the colonial period, as is discussed below.

Market taxes were introduced by the French in 1906. While most market sellers had to pay annual taxes, livestock traders were subject to taxation on each animal sale they concluded. As a result, animal transactions which previously would have taken place in Niger, were subsequently concluded just south of the border, in Nigeria. During the twenty years that the French collected market taxes, large markets developed in north Nigeria, just miles from the border of the French territory, leading the Governor General of Niger to comment in 1923 that:

> 'In Nigeria, where the markets are free, the English have succeeded in attracting all of the commerce of the colony of Niger. All along the Nigerian border, it is possible to notice the absence of markets on the French side, the ruins of abandoned markets and, on English soil, in immediate proximity to our largest centers of population, very busy markets used especially by our subjects' (cited in Baier 1980:102).

In 1918 the customs barrier on the Nigerian border was abolished because the costs of maintenance exceeded the receipts of duties and tariff (Fuglestad 1983). The livestock trade with Nigeria resumed, although a number of destabilising factors impeded the development of commercial networks on the side of Niger. Firstly, in order to escape tax collection, people dispersed and settlements broke up in many areas of the sedentary south. In addition many Hausa fled south to Nigeria as the French did not relief tax levels during the severe drought of 1913-15, but, instead, started requisitioning cattle from Hausa producers in an attempt to remedy the desperate situation in the north. Meanwhile, market taxes in Niger had already led to the diversion of much of the livestock trade to just across the Nigerian border.

One of the initial effects of French administration was therefore to divert the livestock trade from the north to the south; the Tuareg-controlled trans-Saharan trade had been disrupted, while market as well as transit taxes in Niger led to the development of markets southwards just across the Nigerian border. These effects were not intended by the French, as they were keen to attract commercial activity to their own territories - Niger itself or French-held northern Africa (Kimba 1906, cited in Bellot 1983). Furthermore, the imposition of head tax prompted more livestock sales from pastoral Fulani, who were increasingly represented in the country through being able to move into areas left by the Tuareg following the French suppression.

Development of a coastal consumer market for livestock

Although the volume of the livestock trade at the turn of the century cannot be estimated, it is clear that it grew rapidly between 1900 and 1930. Baier (1980) reports that official statistics on exports from Niger show an increase from some 5000 head of cattle in 1914 to an average of over 40,000 per year in the early 1930s, but he underlines the unreliability of these figures as an estimated two-thirds of cattle taken into Nigeria may have crossed the border unrecorded. Evidence to support the impression of growth in the cattle trade is more conclusive, although indirect, on the demand side in Nigeria (see Chapter 4 above).

Increased consumer incomes and growth of towns in southern and coastal Nigeria, especially Lagos and Ibadan, stimulated the demand for meat. Completion of the railway to Kano, the principal livestock market in Northern Nigeria, from Lagos in 1911 provided an impetus to the development of commercial agriculture and livestock marketing in Nigeria (Davidson 1984, Baier 1977). The resulting economic growth led to a gradual re-orientation of the existing trade networks to the south, as cattle-producing areas to the north - including Niger - came to be increasingly closely linked with cities and areas of export in the south.

Adaptation of regional marketing networks

Opportunities created by greater demand and accessibility of the Nigerian market in the south, as well as measures taken by the French military regime, caused some regional livestock trade networks to expand considerably, while others declined. The French attempted to revive the trade northwards, after they had suppressed the Tuareg revolt in 1918, but by then producers had already turned their attention to commercial opportunities in the Nigerian south (Fuglestad 1983, Baier 1980).

Since livestock are a mobile product for which transport costs are relatively low, growth in demand for slaughter animals in the south had repercussions as far north as the desert edge. Firstly, a polarisation within the commercial network occurred in which those markets with greater opportunities for export boomed at the expense of others. With virtually non-existent road networks and no railway lines, export-oriented markets tended to be those already situated on the old trans-Saharan caravan trails (Bonte 1967). In effect, there was a shift from a commercial network centred around a long-distance trade to one that encompassed a great many more people spread over a large area; this led to a process of decentralisation of the market economy during which the importance of urban centres decreased in Niger (Fuglestad 1983). Tahoua is an example of a major urban livestock market, whose importance declined considerably when bush markets developed after colonisation (Dupire 1962a). Dense regional networks developed especially from present-day Departments of Tahoua, Maradi, Zinder and Goure in Niger towards the towns of northern Nigeria.

Markets that developed under these conditions became specialised on the basis of their location and function in the export cattle trade. At the first point in the marketing chain were the collection markets, on the frontier between the pastoral and sedentary zone, where trade in nomadic cattle became centralised; pastoralists especially favoured those markets which were also located on transhumance routes. Certain of these markets drew pastoral livestock from a catchment area with a radius of as much as 150 km. A second level of market - the relay markets - developed close to the border with Nigeria, but still sited on old caravan trails. Here, cattle coming from different areas in Niger were resold and regrouped before taken across the border from where they were moved to urban centres in the south. Therefore, while an underdeveloped infrastructure in Niger confined the growth of export routes and cattle markets to the old caravan trails, the growth in demand brought about not only a re-orientation of marketing southwards, but also a re-organisation of the marketing structure, resulting in a differentiated livestock market hierarchy (Bonte 1967, Dupire 1962b, Dupire 1972).

In the development of livestock trade to the south, two principal axes could be distinguished; one route originated in the western region of the Niger river valley, (the Dallols), from which cattle were trekked to

Sokoto, Kaduna and further south within Nigeria. Another major route originated in the central region, from where herds were assembled in Gobir Tudu and Damergu, to be transported by rail to Kano or Lagos. These areas, especially Dallol and Ader, had initially attracted the first WoDaaBe immigrants because of their relative safety under French control. The developing cattle trade was a further attraction for this migration movement and numerous groups of WoDaaBe rapidly populated the valleys of Tarka and Damergu (Bonfiglioli 1988).

The desert-savanna trade in Damergu in central Niger was transformed as a consequence of the new southern demand for cattle. As has been discussed, trade had been directed northwards in the pre-colonial state of Damergu, based on a grain-livestock and salt exchange between Hausa and Tuareg. When demand for meat in Nigeria began to grow in the early part of this century, the Damergu traders soon realised that more profits could be made from selling livestock rather than salt in the south. The salt trade from the desert to savanna was left to the Tuareg, and by 1910 most Damergu traders had shifted entirely to the cattle trade, which replaced farming as the principal activity among some of the settled Damergu population.

However, the supply of livestock from Tuareg in the north was interrupted when all desert trade was halted after the Tuareg revolt in 1916. This trade route was curtailed for a number of years, as combatants had filled in the wells along the route, and many Tuareg had fled to Nigeria and only gradually returned after 1922. In the meantime, Damergu traders were able to replace their lost supply of cattle from the north, by drawing on the Fulani pastoralists who were moving into the areas vacated by Tuareg.

Transformation of pre-existing trade networks as a consequence of the growing volume of livestock trade southwards was less pronounced in southern central Niger. The geographical scope of these networks was very wide as many routes led into Nigeria, and some as far as Lagos. But as the Kano railway line came to dominate the livestock trade, these networks contracted, and started to resemble more closely those originating farther north. By 1920, few traders from present-day Zinder Arrondissement in Niger went any further south than Kano (Baier 1980).

Prior to the expansion of the Nigerian demand for meat in the early part of this century, markets in the Sahelian region served the pastoral economy by supplying foods (particularly cereals) and other products which pastoralists themselves did not produce, while offering a source of live animals and dairy products from pastoralists to non-pastoralists. Thus Sahelian markets functioned primarily as foci for an intra-regional exchange system, rather than as outlets for an inter-regional export trade in live animals. In serving this role, markets were located in or near sedentary farming zones, with the most important ones sited on the frontier of the pastoral zone, as a visit to these markets was convenient in terms of the transhumant pastoral production system.

Changing terms of trade

During the first decades of this century, shifting terms of trade particularly favoured pastoral products in relation to cereals within Niger. Prices and exchange values of all pastoral products increased in this period but for different reasons in the case of the trans-Saharan trade compared with trade directed southward. Camels were a product from the trans-Saharan Tuareg trade. The 1911-14 drought, the Tuareg uprising and the subsequent interruption of the trade and Tuareg exile in Nigeria reduced the supply of camels leading to an increase in the camel:millet exchange rate by a factor of fifteen, between 1909 and 1920.

Disturbances in the northern desert region had much less of an effect on the prices for cattle, but other factors created a ten fold increase in the exchange rate between cattle and millet over the same ten year period (Baier 1980). As has been described, the Fulani pastoralists quickly became much more important than the Tuareg as suppliers of cattle, but Fulani herds, especially those in Niger, had been severely struck by the great rinderpest epizootic of 1887-91. A series of poor rainfall years in the early 1900s culminated in the 1911-14 drought which hit when Fulani herds were still in the process of recovering from the rinderpest disaster. Outbreaks of rinderpest re-occurred in 1913 and 1920, this time also badly affecting Fulani cattle which had moved into Niger and many pastoral families had to resort to agriculture. However, by the end of the second decade of this century, most had already reverted to pastoralism and were able to participate in the growing livestock trade to the south, since even a reduced herd was viable under the favourable terms of trade between cattle and grain (Dupire 1962a, Bonfiglioli 1988).

The shortage of cattle after losses from disease and drought, which typically raises the value of livestock as pastoralists retain more animals in order to rebuild their herds, coincided with the unrelated event of high demand for cattle to the south. Thus, this period of reduced supply at a time of increased demand led to great increases in the price for beef cattle (Baier 1980).

The exchange value of livestock is probably best expressed as the relative difference between millet and livestock prices, since voluntary

Table 3: The Cattle: Millet terms of trade in Niger 1920-1966. The quantity of millet in kilograms obtained from the sale of an export bull between 1920 and 1966

Year	*Central Niger*[a]		*Tanout Arrondiss.*[b]	
	Cattle price CFA	*Millet equiv. kg*	*Cattle price*	*Millet equiv.*
1920	188	3760		
1921	130	-		
1926	288	823		
1927	225	-		
1934	90	257		
1935	92	230		
1936	130	520		
1938	213	888		
1941	300	811		
1945			1600	1330
1947			3500	1460
1948			3700	510
1949	3750	'250	4300	360
1950			3500	-
1951			5900	910
1952	7500	750	8500	1060
1956			5700	570
1957	9000	600	9800	700
1960	12000	600	10400	1600
1961			13800	1530
1962			14000	1870
1963			11500	1100
1964			12300	-
1965			13200	1470
1966	14440	963	14300	650

Notes:
[a] Baier (1980)
[b] Sutter (1982)

livestock sales were mainly undertaken by pastoralists to acquire grain. Table 3 shows the quantity of millet in kilograms obtained from the sale of an export bull for selected years between 1920 and 1965.

From the mid 1940s until after Independence, terms of trade between cattle and millet show a high degree of variability. These fluctuations are to a great extent dependent on the millet price, which is affected by the success of the harvest, and are thus closely related to rainfall variability. For Tanout Arrondissement relative cattle prices declined rapidly after the low and irregular rainfall years of 1948-49, but a period of good rainfall during the 1950s raised cattle prices to a high level during the early 1960s (Sutter 1982).

Relative cattle prices

Between 1920 and 1960 cattle prices fluctuated within wide margins (see Table 3). After peaking in 1920, prices fell with the trade recession in 1921. As meat is a highly income elastic commodity falling real incomes pulled down cattle prices faster then prices of other agricultural commodities or overseas exports, and terms of trade for beef collapsed as a result. Cattle prices recovered from their low level with the continuing devaluation of the franc against the pound, since cattle from Niger were being sold in Nigeria and the pound was used in most transactions in the southern export markets of Niger (Baier 1980, Larrat 1955).

Cattle prices fell again as a result of the recession in the early 1930s. The situation was aggravated as the depression coincided with a period of low rainfall. Farmers were forced to sell their animals en masse, which brought about a sharp fall in livestock prices (Fuglestad 1983, Salifou 1975). Within a few years cattle prices had fallen to a third or a quarter of their former level and administrators noted that pastoralists, who were being taxed at rates set at more prosperous times, were suffering considerable hardship. However, it was not until 1934 that the cattle tax was adjusted downward to bring it into line with market conditions (Baier 1980). After the general depression of the early 1930s, cattle prices rose again to reach a peak during the mid 1940s after the Second World War.

A growing demand for slaughter animals led to a decline in camel prices relative to prices for cattle and smallstock sold for slaughter. Between 1938 and 1953, absolute prices of cattle and sheep rose by a factor of 23 and 25 respectively, against a seventeen-fold increase in camel prices during the same period. That the increased demand for beef in Nigeria was to a large extent responsible for this phenomenon, is shown by the sudden rise in cattle and sheep prices relative to those of camels in 1942, at a time when trade with Nigeria picked up again after a near stand-still during the first years of the war. The decline of the trans-Saharan trade and the increasingly widespread use of motor transport may have further devalued the camel (Larrat 1955, Baier 1980).

These differential price changes have contributed to the improving economic position of Fulani cattle pastoralists during the colonial period, while the situation of the Tuareg, to the extent that they continued to be primarily camel herders, deteriorated (Baier 1980).

Growth of the livestock population and trade: 1930-60

The livestock population in Niger grew rapidly from the 1930s onwards. One reason for the increase is due to the establishment of the *Service Veterinaire de l'Elevage* in 1927, and the start of massive vaccination campaigns on a regular basis after 1936. The rise in cattle population was also related to the conversion of numerous Tuareg groups from camel to cattle herding (Bonfiglioli 1988), in response to the long-term increase in cattle prices relative to camel prices between 1900 and 1960, brought on by the rise in the cattle trade (Baier 1980).

Moreover, the population of pastoralists also grew rapidly in the northern regions of Niger from the 1930s as a result of immigration following the change from military to civilian administration in 1922. Peaceful conditions and the relaxation of constraints on the livestock trade which followed civilian rule brought back an important part of the population who had fled to Nigeria during the era of military rule. As many of these were either pastoralists (Tuareg and Fulani) or cattle-keeping Hausa farmers, these migration movements added considerably to the growth of the livestock population in Niger (Bonfiglioli 1988).

The availability of veterinary and commercial opportunities led to a further migration of WoDaaBe communities into other regions of Niger, notably the Tarka valley and northern Damergu. Communities of Hausa merchants and brokers established themselves on the fringe of the pastoral Fulani zone, as the zone moved northwards. Once underway, the northward migration of Fulani pastoralists was encouraged by the government, which reduced cattle taxes as was the case in the Agadez circle (Baier 1980) and Damergu, where in some instances cattle taxes were reduced by 50% (Bonfiglioli 1988), and with the construction of wells in the pastoral zone (Baier 1980). For many WoDaaBe coming from the south, these migration movements represented a shift from a semi-sedentary to an almost exclusively nomadic way of life (Dupire 1962a).

French colonial policy towards pastoralists and livestock marketing

During the colonial period, livestock marketing was affected by activities of the French administration in a number of ways. Overall, colonial policy in Niger was characterised by lack of direction and coherence. In his study on the colonial history of Niger, Fuglestad (1983) notes the rapidly changing nature and the extremely uneven impact of French rule during the years of colonialism. Policy effects on the livestock trade were for the most part indirect and often unintended; the results of policies targeted elsewhere.

From the early 1910s the French inaugurated a new economic policy, based on expectations about the economic future of Niger, but consisting mainly of imposing heavier taxes and more rigid controls on collection (Fuglestad 1983). This policy provided further stimulus to the emerging export livestock trade to Nigeria by compelling Fulani pastoralists (as well as Hausa agro-pastoralists) to increase their production and commercialising their surpluses to a greater extent than before.

In trying to stimulate production and trade in the colony, efforts of the administration were primarily directed at the development of groundnut cash-crop cultivation. Although livestock was recognised as one of Niger's most important resources, organisation of the trade and development of a commercial network was not undertaken by the French. The West African economies under colonial rule have been termed 'Open Economies' by Hopkins (1973:168) following an economic model in which production for overseas export and expatriate interest and authority are central. In Niger, European control and interest focused primarily on the groundnut trade, and the livestock trade remained in the margin of this model, since production of livestock was not destined for overseas markets and was not controlled by European commercial companies.

Livestock production however was affected by the expansion of groundnut cultivation under colonial economic policy. Especially in the central and eastern regions, commercial groundnut production developed at a fast pace from the 1930s, with a fifteen fold increase in total production up to 1961. Most of the overall production increase was accounted for by the expansion of cultivated area northwards into drier regions which were previously considered unfit for cultivation on a permanent basis (roughly north of the 500 mm. isohyet), but which were used by pastoralists (Bonfiglioli 1988, Fuglestad 1983). Government concern regarding reduced groundnut yields in these marginal areas led to the setting of a northern cultivation limit in 1954 (see Map 3) (Granger in Bonfiglioli 1988). This limit was relocated upwards following the progression of agriculture, and ultimately served to protect the rights of farmers rather than pastoralists.

These developments forced pastoral Fulani to move further and further northwards and east into the outer northern edges of the Sahel and even into the southern fringes of the Sahara desert, away from the main groundnut production zones. The French encouraged this upward migration of pastoralists by reducing tax levels in the north and launching a programme of well-sinking to open up new pasture land. However, the result was that pastoral Fulani were not only cut off from crucial pasture areas in the south, as farmers appropriated the more fertile valleys and began cultivating around dry season waterpoints, but in addition, were more isolated from markets in the agricultural zone.

With regard to livestock marketing, the main direct intervention of the administration was at first to tax whatever trade existed 'by simply superimposing itself at the top of a pre-existing hierarchy, skimming off the revenue which reached the highest levels' (Baier 1980:101). However, at least for the livestock trade, policies adopted to this end proved mostly self-defeating. Taxation of the trans-Saharan trade speeded up the process of diversion of trade to the new southern route through Nigeria, market taxes on livestock trade led to relocation of markets just across the border in Nigeria and attempts to collect export taxes at a customs frontier merely impeded the development of a profitable trade with Nigeria.

The situation changed with the appointment of Brevie as the colony's first civilian officer in 1922. He immediately put an end to the requisitioning of livestock, abolished all market taxes and encouraged the exportation of livestock and hides and skins to Nigeria (Fuglestad 1983, Bonfiglioli 1988). Taxes remained at a moderate level and the customs barrier, abolished in 1918, was not re-erected. Trade with Nigeria gained momentum fast, and in less than ten years after the great famine of 1913-14, livestock were once again exported southwards (Baier 1980, Fuglestad 1983).

A period of relative prosperity followed, interrupted by the recession and low rainfall years in the early 1930s. However, crisis struck again in 1937 as the price of groundnuts, an official export earner, fell and the franc was devalued. The French federal authorities in Dakar decided to re-establish the customs barrier in 1937-38. As before, markets along the border declined and commercial activity, including the livestock trade, once again moved south into Nigeria.

Administrative control on the customs barrier was relaxed after 1946 when the French colonies became Overseas Territories. It became relatively easy for local livestock traders to cross the border illegally, as the French themselves had little vested interest in the livestock trade and apparently did not interfere. Local commandants who were aware of the potentially damaging economic effect of the customs barrier not only looked the other way but virtually encouraged traders to take advantage of the lax supervision. As a result, the southward exportation of cattle, especially from central Niger (Konni, Ader and Gobir Tudu) soon recovered and steadily increased throughout the rest of the colonial period.

Fulani marketing practices during the colonial period

The degree and type of market integration by Fulani in the colonial period was differentiated according to live animal sales, on the one hand, and marketing of dairy produce on the other hand. Live animal sales were undertaken by necessity and as a means of culling the herd whereas the production system was dependent upon and therefore oriented towards marketing of dairy produce.

Dupire described how the WoDaaBe, as exclusive cattle herders, were completely reliant for many of their subsistence and other needs on exchanging with neighbouring communities, while at the same time, they produced:

> 'without preoccupying themselves with outside demand, they utilise their resources to the maximum and do not separate from their cattle unless forced by economic or social constraints' (Dupire 1962a:127).

The primary influence on Fulani patterns of live animal sales during the colonial period was the limitation on marketing imposed by their annual north-south transhumance cycle. Animal sales patterns have been closely related to transhumance cycles in Sahelian nomadic systems (Bernus 1988). In order to maintain optimal herd management through transhumance, Fulani pastoralists in Niger had in the past to accept sub-optimal animal sales patterns.

Pastoral transhumance patterns in Niger, as elsewhere in the Sahel, are based on moving to the drier north in the rainy season, to give animals access to the best quality pastures, and falling back south in the dry seasons onto poorer-quality but more abundant pastures (Bremen and de Wit 1983). Topographical features, in particular the Air Massif in the southern Sahara, also influence rainfall distribution, such that rainfall is extremely rare east of the Massif, but adequate to the west, where the regions of Azawak and Tamesna support temporary grasslands in the rainy season. It is to these regions that pastoralists trek to during the rainy season (Fuglestad 1983, Dupire 1962a).

During most of the colonial period, markets were situated in or near sedentary farming areas, on the southern border of the WoDaaBe transhumance zone which was the frontier between the northern limit of cultivation and the desert (see Map 3). Thus the northern rainy season transhumance of the pastoral Fulani cut them off from markets for three to four months a year (Dupire 1962a). The markets sited along the old caravan routes were able to supply pastoralists with cereals from the surrounding farmers as well as offer other imported commodities brought along the trade routes. Dupire (1962b) noted that markets formed the main attraction for WoDaaBe during the dry season, and that their location was one of the factors that influenced the location of camp sites.

Live animal sales by WoDaaBe to these frontier markets showed a strong peak at the end of the dry season and beginning of the rainy season (Dupire 1962a). At the start of the first rains in May and June, WoDaaBe moved to the northern grazing areas, away from the markets. Livestock were sold prior to departure in order to obtain salt, clothes and other necessities needed for the migration northwards and for which there would be little opportunity to buy other than on very unfavourable terms once outside the market circuit. However, the peak in sales at the end of the dry season occurred when cattle prices were at their lowest point in the year, when animals were in poor condition and the lack of cash among the settled population had also reduced demand (see Fig. 1).

WoDaaBe's transhumance cycle could not be phased with price cycles in the southern frontier markets. The time when cattle prices reached their peak was in January after the rainy season, when cattle reached their best condition, and settled farmers in the southern sedentary zone had surplus cash from their harvests to invest in cattle, either for trade or for themselves. This was also the time when millet prices were lowest, following the harvest, and thus when the cattle:grain price ratio would be most favourable for pastoralists. However, WoDaaBe had no access to markets at this time, as they had not yet returned from their northwards migration.

In addition to attending markets in order to sell stock or dairy produce, WoDaaBe were also involved in barter and exchange systems away from the formal market sites. The barter of animals in the villages in the sedentary zone in return for cereals, but often for larger

Figure 1: Fulani Pastoralists: Pre-commercial and Commercial Relations of Use and Exchange Values

				PRE-COMMERCIAL		*COMMERCIAL*	
MONTHS	SEASONS	MIGRATION & MARKETS	PRICES MIN/MAX	USE/EXCH *VALUES*	BARTER/ SALES	USE/EXCH. *VALUES*	BARTER/ SALES
Aug	Rains	in north,	Min.	*use value*	sales	*use &*	barter
Sept	—	no market	cattle	*milk*	cattle	*exchange*	milk
Oct	—	access				*value of milk*	—
	—	pre-commercial					—
Nov	Cold,	begin	Min.	*use value*		*exchange*	sales
	harvest	moving	cereal	*milk*		*value*	cattle
	—	south				*cattle*	& purchase
Dec	Cold		Max.	*exchange*	barter		cereals
	—	in south,	cattle	*value milk*	milk		
Jan		market	—		—		purchase
Feb		access		—		—	cereals
		pre-commercial	—				
Mar	Hot,	—		—		—	
April	dry	—		—		—	
May	Trans-	begin	Max.				
	itional	moving	cereal				
		north					
June		—	Min.	*exchange*	sales		
		—	cattle	*value*	cattle		
July		—		*cattle*	& purchase		
					cereals		

expenditures such as cloths and gowns, was a common practice (Dupire 1972). In the rainy season when WoDaaBe were removed from markets for three to four months, at no point were they completely cut off from commercial networks. They were visited in the bush by independent itinerant traders (*dioula*), who bartered or sold food or goods to the pastoralists, for their livestock. The terms of these exchanges were also not advantageous to the pastoralist, due to the lack of competition from other traders as in a market place. The *dioula* could command high prices from customers on his route, making them pay dearly for the cost of transportation (Dupire 1972)

Long distance nomadic pastoralism - in the case of the WoDaaBe Fulani - was therefore incompatible with optimal live animal marketing, given the distance to cattle-buying markets in relation to their wet and dry season pastures. However, the semi-nomadic Fulani whose dry season zones were located south of the frontier market area had the opportunity of selling their fattened cattle at the peak price period after the harvest, on their return migration southwards to the sedentary zones in southern Niger and northern Nigeria (Dupire 1962a). The shorter transhumance cycles of the semi-nomadic Fulani also allowed them to pass the markets during the rainy season in July and August on their way up north, and thus sell some cattle at somewhat better prices than those obtained by WoDaaBe who had left the market zone earlier for the north when the rains began.

Several other important factors influenced the pattern of live animal sales by pastoral Fulani. In addition to the main peak of animal sales by WoDaaBe at the end of the dry season, a second peak occurred during the annual tax collection period in April, at the end of the hot dry season (Dupire 1962a). Although again cattle prices were nearly at their lowest point in this month, due to the poor condition of the animals and low demand among farmers, WoDaaBe were forced to sell under these adverse market conditions if they were to pay taxes, which would have flooded an already weak market and further reduced prices.

The WoDaaBe production system itself permitted and even encouraged a seasonal disengagement from live animal sales. The seasonal basis of subsistence oscillated between virtually complete reliance upon consumption of dairy produce and gradual replacement of dairy produce by cereals in the diet (Dupire 1962a). In the rainy season when WoDaaBe were far from markets, as we have seen, they depended upon the milk from their herds (see Fig. 1). Little millet was purchased from the sales of animals that took place at the beginning of the rains in the southern market zone, prior to the migration northwards. In the dry cold season after the rains, WoDaaBe were still able to withhold live animals from the market since they could depend both on consuming milk and bartering dairy products with farmers when they returned to the southern portion of their transhumance cycle. The higher caloric value of grain bartered for dairy produce at this time made bartering much in the pastoralists' favour (Swift 1979). Only in the transitional season before the rains, when milk from the herds was exhausted would WoDaaBe depend upon selling live animals in the markets.

Thus, as with the case of live animal sales, WoDaaBe purchases of cereals were not necessarily linked to the season of most advantageous prices, but were instead contingent upon the opportunities and demands afforded by their pastoral transhumant system.

Overall, the patterns of livestock sales and cereal purchases in conjunction with the reliance on dairy production and barter by the WoDaaBe Fulani in the late 1940s are characteristic of a non-market orientation towards live animal sales and a market orientation towards dairy product sales. Unnecessary animals were sold, but neither the herd management system nor domestic economy was geared towards animal sales, which therefore represented a residual although essential activity.

Livestock sales and price responsiveness: 1950s

Except for payment of taxes and purchases of necessities at the end of the dry season, WoDaaBe had no need and little incentive to sell animals, since they could rely on consumption and barter of dairy produce for as long as their cows gave milk. Moreover, at the season when sales of cattle would have been most attractive, in terms of prices, the WoDaaBe had no access to markets.

According to Dupire, the WoDaaBe resisted selling livestock because the terms of trade were regarded as so unfavourable that they hardly considered their cattle worth selling (Dupire 1962a). This statement does not imply, however, that they did not market their cattle - only that they did not find an attractive market at the times when it was either possible or necessary to sell them. Dupire records that WoDaaBe presented to the markets various categories of saleable cattle; mature bulls as well as cull animals such as aged cows, diseased and wasted animals and pack oxen at the end of their working life (1972b). The analysis of herd structures among the WoDaaBe studied by Dupire (1962a) shows that weaned males constituted on average 11% of herds, while oxen (which were used as pack animals by the WoDaaBe) made up only a further 2% of herds. This finding is consistent with an earlier vetinary study among WoDaaBe herds (Robinet cited in Larrat 1955). As Baier remarks, the evidence presented by veterinarians who had been sampling herd compositions among cattle herds in Niger since the early 1920s, showed that:

> '...animal husbandry in Niger always had a commercial dimension...its importance increased considerably over the last fifty years...male animals were not kept in herds in large numbers and...continual culling of males from herds provided a steady supply of animals for the market' (1980:145).

WoDaaBe were very aware of local and seasonal variations in price between markets, according to Dupire, but as she noted:

> 'they often succeed in taking advantage of the former, but they do not so for the latter, at least not for their transactions in livestock and for their most important purchases of grain' since 'the Fulani cannot adapt themselves to make the most of the seasonal variations in price' (Dupire 1962b:357).

One of the principal pressures to sell animals was in order to pay the annual government tax, in April, at the end of the dry season. At this time, WoDaaBe were forced to accept whatever price they could, and would sometimes move from one market to another trying to sell their animals which were in poor condition and for which there was low demand at that season.

As an indication of their interest in obtaining the best prices, Dupire found in central Niger that at the time of tax payments Fulani herd owners would sometimes journey to markets in Nigeria, on the other side of the border, in order to get the greatest value from the sale of even one animal. Also, rather than selling at a large urban market, WoDaaBe preferred to sell at big markets in the bush, where livestock prices were often higher and millet often cheaper, and would travel considerable distances - from 45 km to 150 km - in order to attend these preferred markets. Elsewhere, in south western Niger, it was noted that pastoral Fulani would not always sell their animals locally, but would visit a number of other markets descending south down the Niger river as far as into Nigeria, seeking to sell at more favourable prices (Dupire 1972). In the region of western Niger, Dupire found again that Fulani preferred not to sell at bigger livestock markets, where prices were deflated, but travelled long distances to sell their stock at smaller markets (Dupire 1972).

The northward shift of markets into the pastoral zone since the 1960s

We have discussed how the supply of livestock from pastoral Fulani was, during the 1950s, highly seasonal consequent upon the internal dynamics of the pastoral system rather than oriented to the external market demand conditions and price fluctuations. The absence of collection markets within the northern transhumance zone meant that one of the main suppliers to the livestock trade - the nomadic pastoralists - were constrained to timing their sales when their transhumance cycles brought them into contact with markets located on the southern edge of the transhumance zone. Most sales occurred at the middle or end of the dry season, when taxes had to be paid or prior to rainy season departure, both times when cattle were in the worst condition. As a result, both the quantity and the quality of animals presented for sale by Fulani pastoralists was incompatible with the export trade demand. The seasonal pattern of animal supplies in these markets was poorly adapted to the year-round demand for beef in Nigeria, and the quality of the animals presented for sale was often not what exporters were looking for.

Incompatibility between supply and demand patterns brought about a geographical shift in the location of markets, which is discernable from the post-independence period, particularly after the 1970s drought (IIED 1990). As livestock traders faced increasing difficulty in meeting the steadily growing demand for beef in Nigeria, more and more traders decided to look for cattle in the bush, at the source of production, offering better prices and finding better quality animals. As a consequence, bush markets which were close to good pasture areas developed, while the big urban markets started to regress. This transformation of the marketing structure paralleled the first shift which had taken place at the beginning of the century, in the initial response to the growth of the Nigerian demand for meat. As in the case of the first shift, location on the old caravan routes was an important factor in the development of these new 'bush' markets (Dupire 1972, Bonte 1967).

An example of the northwards movement of markets is provided by Eddy (1979). The market of Kao, in the Azawak region, was formerly at the very northern end of the livestock marketing chain, on the frontier between the farming and pastoral zones. Kao's importance as an animal market was established only after the 1970s drought, when it surpassed in volume of trade other markets immediately to the south, which had served as the major animals markets of the eastern Azawak region. By the 1980s, the Niger Range and Livestock project likewise found that more northern towns, such as Tchin Tabaraden and Abalak, had become important livestock collection markets (Swift 1984). These livestock markets did not exist several decades earlier, at the period of Dupire's studies, and are situated some 50 to 100 km north of the most northern livestock markets mentioned by Dupire.

This represented the first stage in a northward shift of the market structure in Niger. In effect, the profitability of the livestock trade to Nigeria led to a movement of the market structure towards the pastoralists, since pastoral movements towards the market had proved insufficient to meet demand.

The second stage in the upward movement of markets in the pastoral zone followed the development of the 'Uranium Road' in 1981. This road stretches over 1600 km from Birni N'Konni, an important cattle relay market next to the Nigerian border, to Arlit in northern Niger, and crosses the pastoral zone diagonally from the south east to the north.

The northwards shift of traders and construction of a northern road deep into the pastoral zone has witnessed the growth of major livestock markets attracting herders and export traders in large numbers, in areas where no previous markets existed. Thus the head of the cattle marketing chain has moved high up into the pastoral zone. These markets are primarily livestock markets, developed to serve a profitable livestock trade; although consumer goods are traded in these markets, these are not locally produced but are trucked into the pastoral zone, and livestock form the main business of the markets. The new northern markets are therefore centres for an import-export trade, rather than serving the role of exchanging commodities between specialised production systems within a single region.

Increased market orientation among Fulani pastoralists: Seasonality of livestock sales

There is considerable evidence that in recent decades, the major changes in the livestock marketing structures of Niger which have been noted above, together with other events - in particular the major drought in the mid 1970s - resulted in WoDaaBe production strategies becoming more market oriented (Maliki 1981, Eddy 1979, Swift 1984).

There are several indicators of increased market orientation by Fulani pastoralists; firstly, the timing of livestock sales in relation to prices, secondly, types and ages of their livestock sold, and thirdly, degree of their dependence on cereals. Each of these indicators is reviewed in turn.

The seasonality of animal sales indicates the extent to which pastoralists' needs and opportunities for sale can be adjusted to take advantage of seasonal price variations, and thus is a powerful indicator of market versus subsistence orientation, as discussed above.

By the 1970s it is found that the time of livestock sales by pastoral Fulani is no longer confined to dry season culling; supply of cattle to markets was timed according to optimal prices (see Fig. 1). The Niger Range and Livestock Project observed that highest sales levels of their sample households coincided with highest price levels, in the cold season beginning in November, after the end of the rains (Swift 1984). Income from animal sales among WoDaaBe sample households in the project study was concentrated in the cold and hot seasons, and dropped off in the transition season, due both to a fall in the number of animals sold and a drop in the average price (Swift 1984). The data on total cattle sales and mean income from cattle sales suggests that prices are highest in the cold season, about the same in the rainy and hot dry seasons and lowest in the transitional season following the hot dry season, when prices are about two-thirds the peak level in the cold season. However, in addition to the peaks noted, animal sales occurred throughout the year, again in contrast to sales patterns noted in the earlier period.

In another market study carried out during the 1970s, it was found that for the market of Kao, while WoDaaBe did not exploit the peak in cattle prices around January (the end of the cold season) at the time of Dupire's studies in the 1950s, they did appear to be doing so in the 1970s (Eddy 1979). A peak period of supply still occurred in the transitional period during July and August, when cattle in poor condition after the hot dry season were sold off by Fulani pastoralists on their way north to rainy season pastures. But, contrary to the sales pattern noted several decades earlier by Dupire, the pastoralists would begin steadily selling again as soon as they returned from the north, at the end of the rains in October, when cattle were in their best condition. WoDaaBe Fulani, whose dry season camps were in the Kao market catchment area, would sell throughout the cold season peak in prices, again unlike the pattern described earlier when WoDaaBe withheld their cattle from the market at this season (see Fig. 1).

Increased market orientation: Changes in types and ages of animals sold

We shall now consider the changes in types and ages of animals sold by pastoral Fulani, as indicators of their greater market orientation. At the time of Dupire's study, male cattle were not sold until reaching six years of age; other categories sold were cull animals such as aged or unreproductive females and diseased or unfit beasts. However, by the 1970s, it was reported that the typical age of sale for males had been dramatically reduced. Thus in one study, 57% of the males sold were less than three years of age and only 24% of males sold were over 5 years (Swift 1984). In Eddy's market study of Kao, the major age/sex category sold by pastoralists consisted of yearling bulls - 58% of all males sold (1979). Furthermore, older males were held back for sale until the cold season, when prices reached their maximum (Swift 1984). WoDaaBe were also involved in purchasing young males of less than three years, for the specific purpose of fattening them for resale at a later stage in order to gain a price advantage (Swift 1984). On the other hand, most cull cows were being sold in the dry season, at a time when producers were unwilling to sell males which were at their lowest condition (Eddy 1979, Swift 1984). It is apparent that pastoral Fulani in Niger were, by the end of the 1970s, selling younger males which formerly had been retained in the herds until reaching maturity. The Niger Range and Livestock Project calculated that 5-6 years was the optimum age of sale for males, but it is clear that pastoral Fulani were no longer either able or willing to wait for their male cattle to reach this age before selling.

Increased market orientation: Changes in herd composition

Since the beginning of this century, WoDaaBe have increasingly taken up herding of other categories of livestock in addition to cattle. These changes in herd composition can be related to the growth of the livestock market in Nigeria and the northward migration of pastoral Fulani into Niger.

The rapid rise in cattle prices during the beginning of this century was accompanied by a shift to the use of donkeys as pack animals, replacing oxen. According to Baier (1980), the very high prices for cattle by about 1920 were a decisive factor, as the opportunity cost of taking a steer away from a slaughter herd to be trained as a beast of burden became prohibitive, and donkeys came into widespread use. Donkeys had positive attributes for the WoDaaBe as they continued to move northwards in the more arid regions. Not only was the market price of donkeys lower, but they were also hardier and less demanding, in terms of pasture quality and water requirements, than oxen.

As WoDaaBe moved northwards, closer contact with Tuareg pastoralists also led to the adoption of the camel, since the 1930s. Camels came to be used by WoDaaBe for reconnaissance journeys to establish the condition of pastures and later for the transport of bulk quantities of cereals from the market (Bonfiglioli 1988). Again, the relatively higher market value of cattle compared to camels was probably a factor in the adoption of camels.

The adoption of camels and donkeys by WoDaaBe also had an effect on the role of women in livestock management. Women began to look after donkeys, and also took up some additional work with cattle as men's labour had to be divided between camels and cattle (Bonfiglioli 1988).

The raising of small stock was reported by Dupire (1962a) to be a common activity of WoDaaBe women during the early 1950s, though according to WoDaaBe elders they represented no more than 'the granary of the poor' as a means to rebuild depleted herds. However, Dupire noted, that following the example of other Fulani, several WoDaaBe groups had started to invest in sheep, having realised that sheep constitute a source of exchange value more readily realisable than cattle for current expenses. Goats were not kept by WoDaaBe, despite the fact that the high value of their skins made goat rearing a profitable enterprise at the time (Dupire 1962a).

By the 1970s Sutter, investigating monetary strategies among WoDaaBe in Tanout Arrondissement in 1977, found that the sale of sheep covered on average no less than 25% of yearly expenses. He imputed this to the fact WoDaaBe had lost a large proportion of their cattle during the 1968-73 droughts, and were therefore in the process of building up their cattle herds by reinvesting first in small ruminants, which could be sold and the proceeds used for the acquisition of larger stock (Sutter 1982).

By the 1980s sheep production was still found to be very widespread among WoDaaBe. Sheep were generally raised for sale to local butchers or home consumption and not milked (Maliki 1981). Although goats were also kept, these were considerably less important. A study by the Niger Range and Livestock project among 75 WoDaaBe herds showed that the number of small ruminants owned increased with increasing cattle herd size, which was thought to be due to higher levels of domestic meat consumption (Wilson et al 1984). This correlation may also have been due again to the increased market value of cattle, such that sheep were being raised as an alternative source of domestic meat, allowing cattle to be reserved for sale.

Increased market orientation, together with the effects of the 1973 drought, has also brought about a change in the type of breeds raised by WoDaaBe. The traditional cattle breed herded by the WoDaaBe (and named after them) is the Bororo breed. However, by the late 1980s, WoDaaBe herds contained an increasing number of Azawak cattle (Wilson et al 1984). The Azawak breed is said by WoDaaBe to have greater resistance than the Bororo to drought and disease and can adapt to low quality fodder; however the latter breed is claimed to have superior milking qualities (Maliki 1981). Changes in sales patterns between the two breeds suggest that Azawak cattle are raised primarily for sale, while cross-breeding of Bororo bulls with Azawak cows retains some of the good milking characteristics within the herds. Makinen and Arizo-Nino (1982) observed a disaggregation by breed and age of sale of male cattle markets in the pastoral zone. It was found that increasingly herders presented for sale young 2 to 3 year-old male cattle of the Azawak breed, whereas Bororo males were not sold until reaching 6-7 years of age. This development was related to the increased demand for draught animals and steers for fattening by farmers in the southern agricultural zone of Niger and in northern Nigeria. Young males of the Azawak breed aged between 2-3 years old can be trained and kept for resale at 5-6 years of age, by farmers south of the pastoral Fulani zone. Bororo males are considered inadequate for animal traction because of their temperament, huge horns, taller stature and lanky conformation, while Azawak bullocks are stockier, milder in character and easier to train.

Makinen and Ariza-Nino (1982) note that this spontaneous stratification of cattle production, with pastoralists producing young males in the more arid northern zone for traction use and growing out by farmers in the southern agricultural regions, provides evidence of how rapidly livestock owners can adjust their economic behaviour to changing conditions.

Increased market orientation: Greater dependence upon cereals

Since it was found in the 1970s that the WoDaaBe households sold animals throughout the year, the Niger Range and Livestock Project imputed that development to their increased dependence on the market in relation to the WoDaaBe at the time of Dupire's study:

> '..the pattern Dupire describes, of a peak in purchases before the departure for the rainy season transhumance, followed by negligible cash purchases during the rainy season, has changed, at least for the sample households which go to the market

throughout the year. Pressure for money to buy food now exists throughout the year...'(Swift 1984:385).

The basis of WoDaaBe diet in the past has been milk and cereals (Dupire 1962a). Cereals have represented a major expenditure in household budgets of WoDaaBe since the 1940s, but studies now suggest that a number of changes have occurred in the role of cereals, which are associated with the shift to more market -oriented live animal sales by Fulani pastoralists. Firstly, the importance of cereals in the diet has increased in relation to milk, although it is difficult to be conclusive on the extent to which such a change has occurred. Secondly, the seasonal patterns of cereal acquisition and cash expenditures have been transformed, and lastly, the principal method of cereal acquisition has altered from the cereal-dairy produce exchange current at the time of Dupire's studies to a cereal-livestock exchange mediated through the market and in cash.

Dupire (1962a) described how the nutritional regime of the WoDaaBe had two clear seasonal cycles. During the dry season, when milk production is low, millet formed the basis of the diet supplemented by milk. The rainy season was a time of food abundance, when milk and meat were the main dietary components. Only small quantities of millet were purchased (from the sale of cattle) before departure on transhumance, and these were not normally supplemented by additional cereal purchases en route. Throughout the rainy season, daily milk consumption rose steadily to as much as 3 to 5 litres per person. Dupire also emphasised that for at least two months in the rains, slaughtered animals provided almost daily consumption of meat (Dupire 1962a).

Since the 1950s, a number of household budget studies have been conducted among samples of WoDaaBe households (Ganon 1966, Sutter 1982, Swift 1984, Loutan 1985). Despite differences in methodology and geographical area, these studies indicate an upward trend in the consumption of cereals with the important exception of the Niger Range and Livestock Project, whose findings will be discussed below (Swift 1984).

The budgetary studies have been concentrated in the central region of Niger (Tahoua and Tanout Arrondissements), principally sampling pastoral semi-nomadic or nomadic Fulani. Overall, the studies record an increase of per average annual capita consumption of cereals from 124 kg. in the mid 1960s (Ganon 1966) to a high of 178 kg. by the mid 1980s (Loutan 1985). These figures were all higher than the annual consumption rate of cereal noted by Dupire in the late 1940s.

Increased market orientation: Changes in seasonal acquisition and cash expenditures on cereals

The acquisition of cereals showed a marked seasonal pattern, at the time of Dupire's study in the early 1950s. This pattern was clearly related to the seasonal variation in the relative use and exchange values of milk, live animals and cereals to the pastoralists, which was determined by the availability of milk from their herds. The main evidence of this relationship was that pastoral Fulani chose to acquire and consume cereals according to the internal requirements of their production system rather than according to external market variations in the prices of cereals and livestock (see Fig.1).

By the 1970s, the timing and method of cereal acquisitions still shows a seasonal pattern in the Niger Range and Livestock Project budget study (Swift 1984), but is much less pronounced and considerably changed on important points. These changes are associated with the shift in patterns of live animal sales.

In the 1970s, the acquisition of cereals was still inversely correlated to milk availability, in that cereals seasonally replace milk (and meat) in the diet once milk was no longer available. But the overall transformation of the marketing structure which has brought livestock marketing opportunities closer to the pastoral Fulani has meant that the income and timing of livestock sales rather than milk availability has become the principal determinant of cereal acquisitions.

The Niger Range and Livestock Project studies found that, although pastoralists still purchased least cereals in the rainy season at the time of highest milk production, cereal purchases rose sharply in the cold season after the harvest, when cereal prices are at their minimum (see Fig.1). Cereal purchases then remained steady throughout the rest of the year. In Dupire's time, it will be recalled that cereals were not purchased in the cold season, despite their low prices, since milk is still available and cereals could be obtained through barter. Instead, cereals were mainly purchased at the end of the dry season, at their highest price level, when animals were sold off to trim the herds prior to the annual move northwards.

It has been shown above that by the 1970s pastoral Fulani were able and willing to sell their livestock at the season of optimal livestock prices - after the rains, in the cold season. They may also have been selling more of their livestock since the majority of animals being supplied were much younger than those offered in the 1950s. Thus, they were able not only to purchase cereals at the optimal cereal price after the harvest, in the cold season, but they were also able to purchase cereals in bulk, from the higher proceeds of animal sales. The Niger Range and Livestock Project noted that WoDaaBe bought most of their cereals in bulk quantities of usually 100 kg. which had necessitated the keeping of camels, since they are the only animals which can carry such loads (Swift 1984). It was also found by the project that these cold season bulk purchases at good prices allowed pastoralists to accumulate grain reserves for the dry season, thus reducing the need to pay steadily increasing prices for grain from then on until the following harvest. With the greater access to cash provided by livestock sales, the acquisition of cereals had also been monetarised by the 1960s. A study carried out in the 1960s points to the predominant importance of purchase in the acquisition of cereals, by that period (Ganon 1966). Only 17% of the total cereal consumed was acquired through barter.

Another indicator of increasing market orientation regarding live animal sales by the Fulaṇi pastoralists is the change in the role and seasonality of barter as a means of acquiring cereals. According to Dupire (1962a), in the 1950s barter of dairy produce was the most important means of obtaining cereals as indicated by a WoDaaBe proverb 'no milk...no millet' (Dupire 1962a:135). Bartering was however seasonally limited by the opportunities for exchange. Only when WoDaaBe came into the vicinity of markets were they able to barter milk for cereals, this being towards the end of the cold season and in the dry hot season when they camped near villages or bush markets which at that time were only found in the southern zone of their transhumance cycle (see Fig 1). In the past, it was after the rainy season that pastoralists concentrated on bartering, since at that time of year, the exchange value of their milk in relation to grain was much in the pastoral favour, given that the value of grain was lowest after rainy season and the harvest.

In contrast, by the 1970s, the Niger Range and Livestock Project study notes that with the movement of markets northwards into the rainy season pastures of the pastoral transhumance cycle, bartering of dairy produce for grain could take place at markets (Swift 1984). The seasonality of barter has been reversed, since the time when barter is used to acquire cereals is then transferred to the rainy season, and peaks in the cold seasons, while no bartering occurs in the dry hot season (see Fig.1). As we have seen, purchases of grain using cash from livestock sold in the cold season had become the main source of obtaining cereals. Thus the relative exchange values had moved in favour of selling livestock to acquire grain, rather than as before, bartering dairy produce for grain in the cold season, while increased market access further north had opened up the opportunity of bartering dairy produce for grain in the rainy season. By being able to sell livestock at the season when their exchange value was highest (the cold season), the pastoralists could also acquire most of their cereal needs when the exchange value of cereal was at its lowest.

Another method of acquiring cereal in the 1950s was the exchange of animals with travelling traders for cereal, which occurred in the rainy season, when pastoralists were in the northern portion of their transhumance cycle and thus beyond the reach of markets. This form of transaction, as has been discussed above, was usually on terms disadvantageous to the WoDaaBe and thus only occurred out of necessity. Nevertheless, in the mid 1960s, the barter of animals for millet represented 88% of the total value of exchanges, versus 11% in the case of the dairy:millet exchanges (Ganon 1966). But by the mid 1970s, this form of acquiring cereal was described as very rare, since the shift of markets northwards gave pastoralists direct access to markets in the rainy season. This allowed pastoralists to sell their animals and purchase grain at the best prices they could obtain among buyers at a market, instead of having to accept the unfavourable terms of grain:livestock exchange offered by individual traders who had formerly sought out pastoralists in their rainy season grazing camps when no markets existed in those areas (Swift 1984).

In fact, the practice of barter in general was found to be of less economic importance than that of monetary transactions. However, although barter operations were on a small scale only, they did still occur very frequently in the 1960s (Ganon 1975). It is possible that the emphasis given to barter in the earlier studies by Dupire may refer more to the frequency of transactions and less to the total amount of cereal obtained through barter.

Ganon, as one of the main researchers involved in the household budget study in the 1960s, has commented that:

> 'The estimated cash value of barter transactions was surprisingly small although observers have assumed that most of the Fulani's economic exchanges were made in this way. In fact the estimated value of barter was about 13% of all exchanges' (Ganon 1975:700).

The Niger Range and Livestock project, carried out some fifteen years later, found that of the total amount of cereals obtained by pastoral households, 87% was purchased versus less then 10% being obtained through barter (Swift 1984). Moreover, Sutter (1979) found that the cash expenditure on cereals had become considerably more important in relative terms, with an increase of 33% valued in 1978 prices in the decade between the mid 1960s and the mid 1970s. Of significance too is that cash expenditures in relative prices on non-essential items (that is, excluding cereals) had increased much more markedly than for cereal; expenditures on tea and sugar increased by 1272%, clothing by 68% and miscellaneous items by 70% over the same ten year period. Thus it appears that pastoral Fulani had access to more disposable cash by the late 1970s, some of which was spent on buying more cereal but some of which was also spent on general household commodities.

The role of the 1968-74 drought in increasing commercial livestock sales

Many researchers have explained the increasing prevalence of live animal sales among the Fulani pastoralists as a direct and presumably lasting consequence of the Sahelian drought from 1968-74. Extensive and detailed studies were carried out in Niger, which included the pastoral Fulani (WoDaaBe), both before and after this drought period. These studies allow us to estimate the extent to which increased sales were drought-induced, as well as to assess the role of market access, which as has been discussed, has increased over the past twenty or thirty years.

Most of the studies carried out after the 1970s drought have concluded that the drought reduced pastoral herd sizes and, consequently, milk availability leading to an increased dependence on cereals to cover consumption needs, which, in addition, need to be purchased as the reduced availability of milk limits the scope for bartering. This process led, it is argued, to enforced increases in animal sales and thus a shift of the WoDaaBe economy to greater dependence on the market (Swift 1984, Sutter 1982).

The rise in cereal consumption for pastoral households, which was found by most post-1970s drought studies, was thus very likely a short-term consequence of drought, but the Niger Range and Livestock Project study conducted a number of years after the drought found that the rate of cereal consumption was positively correlated with increasing herd size (Swift 1984). This was also the only study which did not find an average rise in cereal consumption, although the sample herd sizes were not larger than those studied earlier in the late 1970s. An explanation may lie in the related finding that larger herds had proportionally fewer lactating cows while the number of dry cows increased. It was found that owners of larger herds tended to wean their calves earlier and opt for an increased proportion of pregnant animals, thereby increasing the herd size at the expense of milk production (Wilson, Wagenaar and Louis 1984). The question then is; was this shift in production goals intended to produce more animals for sale?

Over the same time period, there has been an expansion of livestock markets northwards into the pastoral zone. These markets may have developed in response to the increased supply of animals from pastoralists forced to sell to buy grain, given that demand for beef in southern Nigeria was also rising rapidly in the 1970s. However, the issue now is whether, the drought crisis having precipitated pastoral Fulani into greater market integration, the increased marketing opportunities, and better prices offered by the new markets have encouraged pastoralists to re-orientate their production systems towards more commercial strategies once their herds had recovered from the 1970s drought. The question may be phrased as whether the pastoralists have been holding an extended 'going out of business' sale or have they instead found a new business to engage in?

6

The Trading Patterns of East and West African Pastoralists Compared

Differences in the role of exchange

It was argued in the introductory section that pastoral specialisation, based on exploiting the reproductive capacity of livestock, normally engenders a surplus of animals and by-products which are in demand among non-pastoralists. Our case studies illustrate two distinct modes of exchanging pastoral surpluses, reflecting the historical and ecological differences between East and West African pastoral systems.

In the case of Kenya, the geographical areas occupied by the Maasai and Samburu were relatively contained, within which short transhumance cycles were pursued, while the perimeters of these areas were occupied by sedentary agriculturalists. These boundaries were reinforced under the colonial administration, which effectively encapsulated the Maasai and Samburu. The bounded pattern of the pastoral movements did not permit daily contact between pastoral and non-pastoral peoples in which dairy products could be exchanged. However, adjacent agriculturalists, able to keep very few livestock of their own, had a constant demand for live animals as a source of reproductive wealth which could be transformed into human reproductive wealth through the mechanism of bride-price (Kitching 1980). Virtually all the East African agricultural societies paid bride-price in live animals; livestock also had an important ritual role in these agricultural societies. Animals were therefore scarce and essential in these agricultural societies, since they offered the only means of accumulation. Thus, the pre-eminent exchange value of pastoral livestock from groups such as the Maasai and Samburu was expressed in barter and later sales of live animals to surrounding agriculturalists.

In contrast, the pastoral Fulani of Nigeria and Niger have practised long-distance seasonal migration between major ecological zones, which brought them into daily contact for at least some seasons with settled farmers. In their interstitial role, moving physically between production systems, the pastoral Fulani could thus depend on exchanging the perishable dairy products of their herds, as well as selling animals directly for slaughter to agriculturalists encountered en route (Stenning

1959, Dupire 1962a). While Maasai and Samburu in the past rarely bartered dairy produce, relying instead on realising exchange value through live animal sales, pastoral Fulani could acquire the non-pastoral commodities they needed by taking advantage of the scarcity value of milk and meat within agricultural communities.

Differences and similarities in Maasai and Samburu trading

For the first quarter-century under British administration, these pre-colonial trading patterns underwent considerable disruption, in different ways and for different reasons in the cases of the Maasai and the Samburu. Both groups occupied grazing lands which were adjacent to European ranching areas; however, in the case of the Samburu, their southern boundary included an area of high grazing value, while Maasai had been moved out from most of their best grazing lands. European settlers were concerned with retaining and expanding land areas claimed by Africans which meant that, for Samburuland, livestock marketing was much less of an issue than keeping the Samburu and their cattle within the administratively-defined tribal boundaries. Later, this included providing some formal marketing channels, as a perceived means of stabilizing the livestock population and thus precluding further Samburu demands for grazing land.

Local and long-distance trading by Maasai and Samburu

Both Maasai and Samburu engaged in petty commodity trading in the pre-colonial era; that is, part of their means of subsistence (livestock) were routinely exchanged for goods, mainly foods and manufactured items, and other livestock. This trade took two forms, one with neighbouring agriculturalists or hunter-gatherers, the other with long-distance traders originating from the East African coast. For the Maasai, neighbouring trade was with agricultural peoples on the boundaries of Maasailand while the entrepot for their long-distance imports and exports lay eastwards, in Mombasa. The Samburu local trade was principally southward, while long-distance trade was between Samburuland and the north and east. For both peoples, the Somalis, who had moved southwards from the Somali heartland during the 19th century, provided important trading links, eventually becoming the conduit for the trading of livestock from the Samburu northern rangelands to the Maasai southern rangelands.

The economic forms of local neighbouring trade and long-distance trade were quite distinct. The logic of local trade between neighbouring groups was founded on the exchange of complementary surpluses (livestock for agricultural products) produced respectively by pastoralists and agriculturalists. Additionally, some specialised indigenously-manufactured items such as iron goods were traded by agriculturalists for livestock or their by-products. In this form of exchange, each type of producer had need of the other's surplus or specialised output. Pastoralists could not maintain herds large enough to supply food throughout dry seasons or droughts, while settled agriculturalists such as the Kikuyu, Meru and Kamba, (important trading partners with Maasai and Samburu), unable to keep livestock on an extensive basis, required constant replenishment of smallstock, which formed the basis of wealth through the acquisition of land and wives (Kitching 1980, Marris and Somerset 1971).

Kitching (1980) has argued that in pre-colonial and colonial Kenya, it was the fact that livestock had reproductive power which could be transferred into human reproduction through the medium of bridewealth that gave livestock its pre-eminent value among both agriculturalists and pastoralists. Furthermore, the barter value of livestock by volume compared to grain was generally in favour of the pastoralists, although human labour power embodied in raising livestock was less than that in raising crops. These two points help to explain why, except at times of disaster when the barter value of grain increased, pastoralists rarely sought to initiate trade with agriculturalists, but instead depended upon the latter seeking out trading relationships.

By contrast, long-distance trading was conducted by particular groups (such as the Somalis and Kamba), acting as intermediaries between economic systems, who made profit from the differential value of goods (including livestock) between these systems. Traders would thus exploit the marginal increases in values by converting a series of goods through a chain of exchange transactions between the groups inhabiting different areas. For pastoralists like the Samburu and Maasai, the long-distance traders provided a vital means of restructuring or rebuilding herds or flocks, through conversion of one livestock species for another and by exchanging male for female animals. Additionally, long-distance trade allowed pastoralists to obtain manufactured goods, often from overseas.

Finally, a critical difference between local bartering systems and long-distance trade was that the former was not undertaken solely for profit - i.e. net gain - although indeed some of those who organised trade between pastoralists and agriculturalists were able to accumulate wealth

(Marris and Somerset 1971). Long-distance trade was conducted by third parties, mediating between producers, and was based on net gain or profit, rather than on complementary needs. While pastoralists were closely integrated into the former, local trade, it was not until well into this century that they began to directly engage in livestock trade for profit, either as sellers or traders.

The development of livestock trading among the pastoral Fulani of Nigeria and Niger

The most striking difference in the development of trading by the pastoral Fulani who occupied Niger as compared to Nigeria is that the former were newcomers to the territory, who found both an ecological and an economic niche for themselves as a result of the French conquest early this century. The pastoral Fulani had been well-represented within the Emirates of northern Nigeria for some centuries, during which time close trade links had grown between the pastoral Fulani and the sedentary Hausa. This trade, in the case of Nigeria, involved the long-distance trading of Fulani livestock by Hausa to centres of population in the south, as well as daily market exchanges of dairy products and livestock between pastoral Fulani and Hausa within the north. However, the pastoral Fulani who moved rapidly into Niger, to take advantage of pastures abandoned by the Tuareg, also replaced a pre-existing strong trade link between Hausa and Tuareg. This trading system was effectively turned around within a space of a few years, as Fulani became the principal suppliers of cattle to the expanding economic centres in southern Nigeria. The rapidity of this shift is remarkable; although the French colonial government inadvertently assisted in this shift, it did not have any positively active effect on the incorporation of pastoral Fulani into the re-oriented marketing chain. This process was spontaneous, adaptive, and ultimately very large in scale, with important impacts for the pastoral system.

Ecological conditions caused the more northern pastoral Fulani who initially migrated into the Sahelian fringes of Niger, to develop only intermittent and disadvantageous contact with markets up until the 1960s. Unlike the pastoral Fulani of northern Nigeria, whose transhumance patterns took them through agricultural areas, nomadic pastoralism for Fulani in Niger was incompatible with an optimal marketing strategy, as their requirement to move to northern Sahelian grazing areas took them away from markets at the seasons when livestock commanded the best prices. However, demand originating in southern Nigeria for cattle produced by the northern pastoral Fulani eventually led to the penetration of markets into the Sahelian zone. A second remarkable transformation then took place; as pastoral Fulani in Niger found new opportunities to market their stock more profitably, within a relatively short period of time their production and consumption patterns were altered as a consequence of greater commercial involvement.

We can see no such dramatic changes over this century in the case of pastoral Fulani within Nigeria. Although the scale of their market integration undoubtedly grew immediately after the British conquest, the story there is one of incremental change beginning at the turn of this century. It must also be pointed out that there is inadequate documentary evidence on how pastoralists in Nigeria may have altered their economic system with greater market integration. There exist no studies for northern Nigeria comparable to the detailed work carried out in Niger from the 1950s to the 1980s on pastoral Fulani relations with the market. Fragmentary information from Fricke (1979) for example, suggests that in certain more favourable ecological areas, such as Jos and Mambila plateaux, pastoral Fulani have actively sought out marketing opportunities both for live animals and for dairy produce, and did so very rapidly once these opportunities opened up. However, we lack detailed data on household budgets, as well as data on sales and consumption patterns with which we could assess the economic impacts of greater market involvement for Nigerian pastoral Fulani.

Endnote

The main conclusions of this paper have been set out in the introduction and overview (Chapter 1). These points need only be briefly reviewed here. The historical analysis of livestock trading and marketing by pastoralists located in West and East Africa underlines several findings crucial for the design of policy and plans in the future. Pre-eminent among these findings is that pastoralists have not necessarily been reluctant participants in the market. On the contrary, whenever attractive marketing venues and terms of trade have been present, pastoralists have sought to exchange some of their livestock or livestock products. While recent attention has focused on the enforced stress sales of livestock associated with droughts, pastoralism also has characteristics which encourage exchange as a complement to a subsistence production strategy. Over time, market integration has led some pastoralists not only to greater dependence on marketing, but also a re-orientation of domestic economies and herd management to include marketing as part of the overall production goals.

The degree to which pastoralists have been voluntarily engaged in marketing (as opposed to stress selling), has depended therefore on the economic environment of the market, an environment highly susceptible to positive as well as negative intervention. If there is a single lesson to be learned from the past in this case, it is that indirect intervention in the form of infrastructural support is the measure most likely to contribute to an attractive marketing environment. Direct interventions in the market, through the introduction of price controls, government marketing agencies, licensing of traders, and taxes on trade only amount to wasted effort and at worst, can seriously hamper the efforts of pastoralists to market their livestock.

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One of the enduring perceptions about pastoralists has been their reluctance to market their livestock. In *Customary Commerce* Carol Kerven challenges this presumption, by presenting historical evidence from case studies of the Samburu and Maasai of Kenya, the pastoral Fulani in Nigeria, and (with Desirée Dietvorst), the WoDaaBe Fulani of Niger, from the pre-colonial period until the years following Independence.

The book shows how different colonial livestock marketing policies have affected pastoral trade, in some cases actively hampering and in others effectively promoting the efforts of pastoralists to market their stock. Overall, it is argued that pastoralists are price-responsive, attuned to market fluctuations and not inclined to withhold saleable animals from the market.

The author concludes that the most effective inducements for pastoralists to sell their livestock are attractive market prices in relation to the use value which animals have for pastoralists. Indigenous livestock trading systems are able to adapt very efficiently to new market conditions, but direct state involvement is not as successful. External agencies can play a constructive role by providing supportive infrastructures and veterinary services to the livestock sector.

Carol Kerven is a Research Associate at ODI. She has worked for many years in semi-arid Africa carrying out research and development work among pastoralists.

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