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MALI CATTLE EX.ORTS TO COTE D'IVOIRE

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Problem Statement:

During the period 1980-1988, Mali cattle exports to Cote d'Ivoire declined substantially from 23,895 tons-carcass to 15,048 tons-carcass, a 4 percent yearly decline. This drop in cattle export resulted in substantial loss of revenues for producers, cattle merchants and the government.

The objectives of this study are to (1) identify the causes of the decline of Mali cattle exports to Cote d'Ivoire, (2) assess the future outlook for Mali cattle exports and (3) make recommendations aimed at improving livestock production and exports. This study may provide the governments of Mali and Cote D'Ivoire, the donor community and the private sector with relevant information regarding the cattle trade between Mali and Cote D'Ivoire. The observations and conclusions of this study may be the basis for a number of market and policy interventions in the livestock sector in Mali as well as in Cote D'Ivoire.

The analysis in this study is based on both Ivorian and Malian official statistics completed whenever possible by information from interviews. In many instances, the official numbers do not match, especially with regard to export data. It was felt, however, that the Ivorian data were more reliable than the Malian ones. This comes from the fact that at the border posts in Cote D'Ivoire, cattle merchants benefit free of charge from numerous services provided by the Ivorian authorities. As a result, these merchants tend to go through these entry points where the animals are counted. However, in recent years the quality of the Ivorian

Section I will present an historical background of the beef sector in the Cote d'Ivoire and briefly examine the various structural changes that have occurred over the past two decades. In section 2, a model for Ivorian beef demand will be estimated and used to forecast future beef consumption. Section 3 will review Mali cattle sector and identify the causes of export decline. This section will conclude by suggesting steps to be taken to promote cattle exports.

Statistics has been declining as a result of local taxes instituted by the mayor of Tienko, a major entry point for Malian cattle. In addition, for animals transported by rail, statistics on the numbers are obtained by visual estimates, which may be misleading. With regard to Malian statistics on exports, they are very unreliable due to the fact that most of the Mali cattle export pass through the informal marketing channel. Malian authorities attempt to capture the portion of informal export by estimating that it is twice as much as the quantity officially recorded. This dubious practice indeed leads to very inaccurate figures.

Section I. Historical Background: Cote D'Ivoire beef market: 1975-1988

Since its independence in 1960, the Cote d'Ivoire followed a development policy geared toward economic growth. The main objective of this policy was to exploit the country's comparative advantages to induce export-led economic growth. Consequently, coffee, cocoa and timber became the engines of growth in the Cote d'Ivoire economy. During the period 1960-1975, they represented around 80 percent of the export earnings. During the same period, the annual growth rate averaged 7 percent, one of the highest growth rates in the world.

The government diverted the surplus generated from the export of the country's main crops to diversify the agricultural sector and to invest in the secondary and tertiary sectors. Economic expansion and the development of new activities induced immigration from neighboring countries and a rapid urbanization of the population. During the period 1965-1975, population in Cote d'Ivoire grew 3.8 percent per year on average. Over the same period, the urban population increased by 17.4 percent per year. The combined effects of growth in income, population and the rapid urbanization led to an increased demand for animal protein. However, livestock production was only poorly developed in Cote d'Ivoire. Consequently, the country had to rely on imports to meet its demand for meat. In 1970, total beef imports accounted for 90 percent of total beef supply. The Sahelian countries, especially Mali and Burkina Faso, constituted the major suppliers of beef (live cattle) to the Cote d'Ivoire. Starting in the mid seventies, a succession of events substantially changed the structure of the livestock and meat market in Cote d'Ivoire.

1.1 The 1973-1975 drought in the Sahel:

The severe drought of the early 1970s in the Sahel depleted cattle herds of the traditional cattle suppliers of the Cote d'Ivoire. Cattle imports from the Sahelian countries dropped from 198,400 heads in 1970 to only 112,314 in 1976. The share of the Sahelian countries in the total supply of beef in Cote d'Ivoire declined from 90 percent to only 46.8 percent (Delgado and Staatz, 1980).

To make up for the decline in the imports from the Sahelian countries, the Cote d'Ivoire started to import frozen beef from Europe, South America and South Africa. Imports from these regions increased from 0.3 percent in 1970 to 31 percent of total supply in 1976. The government of the Cote d'Ivoire also decided to promote domestic production in order to reduce the country reliance on the Sahelian countries for its beef.supplies. In 1978, the results were limited as domestic beef production accounted for only 14.7 percent of total beef supply up from 10 percent in 1970. In the late 1970s and early 1980s as the worst effects of the drought were over, the share of cattle imports from the Sahelian countries increased to levels comparable to its pre-drought levels.

1.2 Economic Recession in Cote d'Ivoire:

In the late 1970s and early 1980s, a series of external shocks coupled with poor macroeconomic and investment decisions led to a rapid deterioration of the economic situation in Cote d'Ivoire. Between 1981 and 1984, real per capita GDP decreased by 4 percent per year on average. This economic recession was accompanied by a reduction in meat consumption. From 1980 to 1984, per capita meat consumption declined by 3 percent per year on average. The yearly average decline in beef consumption (5 percent) was even more pronounced. The per capita consumption of fish, the main source of animal protein, declined from 23 Kg to 18 Kg during the period 1981-1983.

1.3 Frozen Beef Imports from the EEC:

Starting in 1984, the structure of Ivorian beef supply changed dramatically (table 1). The EEC had been a marginal supplier in the Ivorian meat market became the major non-African supplier of meat. This change came as a result of two factors:

First, in the early 1980s, the EEC decided to reduce its production of milk and butter. Large numbers of cows were slaughtered and the surplus stored in the EEC. However, the high cost of cold storage led the EEC countries to promote the exports of their meat surpluses to developing countries. Second, the introduction around 1983-1984 of the "CAPA", a by-product of the fast food industry, exacerbated the already over-supplied meat market in the EEC. The "CAPA" is a high fat, boneless meat, consisting mainly of beef flanks. The fast food industry after extracting from the slaughtered animals the parts suitable for hamburger, dumps the rest in the market.

A third factor that may have played a role in the increase in beef supply in Europe is the reduction in livestock production cost. Indeed, livestock producers have been able to reduce their average production cost by using animal feeds based on low cost cassava produced in Asia. This may have led to an increase in beef supply which is now finding its way to the developing countries.

Faced with a costly meat surplus, the EEC decided to subsidize the export of its meat surplus. As a result, in Cote d'Ivoire frozen meat imports from the EEC increased from 13,200 tons in 1984 to 40,900 tons in 1987, a yearly average increase of 46 percent. The average export subsidy on EEC frozen meat was 800 CFAF/Kg. The CIF price of frozen beef declined from 492 CFAF/Kg in 1982 to only 203 CFAF/Kg in 1987.

During the period 1984-1987, frozen meat imports from the EEC have depressed the average market price of beef in Cote d'Ivoire and rendered domestic production and imports from the Sahelian countries less competitive. Consequently, the share of beef imports from the Sahelian countries has decreased from 45 percent in 1984 to only 29 percent in 1987. During the same period domestic production increased only by one percent per year on average. In 1987, the Cote D'Ivoire instituted an import tax that caused beef price to increase slightly in the country.

Table 1. Cote D'Ivoire Beef Supply: 1980-1988

	1980	1981	1982	1983	1984	1985	1986	1987	1988
	(000 tons carcass)								
Domestic Production	10.6	11.6	12.6	13.5	13.8	14.4	14.2	14.7	15.5
Import from Sahel	40.5	38.9	29.2	31.5	35.2	39.4	31.5	26	22.8
Non-African Imports	11.2	11.3	15.4	9.4	11.1	17.6	32.5	34.8	41.4
Processed Meat and Offals	.3	.35	.35	.36	.36	.33	.33	.34	.35
Total Supply	62.6	62.1	57.5	54.8	60.5	71.7	78.5	75.8	80

Source: Ministere de la Production Animale de Cote D'Ivoire

It is expected that by 1991, the stock of frozen meat in the EEC will be depleted and the imports of <u>subsidized</u> frozen beef to developing countries will decline substantially. CIF price will gradually recover and total beef consumption in Cote D'Ivoire will drop. The 1989 estimate of the non-African beef seems to confirm such hypothesis. Official statistics put the 1989 imports of frozen beef at 25,400 tons carcass which correspond to a 39 percent decline relative to 1988. Total beef consumption is estimated at 64,060 tons carcass, a 20 percent reduction relative to 1988 consumption level. Official forecasts for 1990 suggests that imports of frozen beef will stand at 20,000 tons carcass, a 21 percent decline from 1989 level. Import from the Sahel will increase by 9 percent to stand at 24,000 tons carcass whereas domestic production will remain at the same level (16,570 tons carcass). In 1990, Ivorian beef consumption is projected to decline by 5 percent. The recent trend described above may not continue due to the CAPA phenomenon. The prospect of an unified European market in 1992 and the new markets in East Europe may cause the fast food industry to expand even more in the future. Hence, more CAPA may be available for export to developing countries and more specifically to Cote d'Ivoire assuming that there is no demand for this type of meat in East Europe. The competitiveness of the domestic beef production as well as that of the supply coming from the Sahelian countries may deteriorate even further in the 1990s.

1.4 Protection of the National Production:

For the most part of the 1980s, subsidized meat from the EEC countries has displaced local production and imports from the Sahelian countries. At the national level, the average cost of production, including transportation, for beef ranges from 850 to 950 CFAF/Kg, whereas the average price of imported meat from the EEC varies between 600 and 650 CFAF/Kg. As a result, local producers cannot effectively compete against their European counterparts for the mass Ivorian meat market. This translates into loss of revenue for cattle raisers in Cote d'Ivoire as well as in the Sahelian countries. In addition, traders prefer to deal with imported meat as the profit margins are much higher than those associated with local meat. This situation results in a decline in all the livestock related activities such as feed, processing, tanning and transportation.

Reacting to the disorganization of the livestock and meat marketing system, the Ivorian authorities have commissioned a study to investigate the possibility of imposing levies on the meat imported from the EEC. The system based on the present EEC agricultural pricing policy will be aimed at increasing the income of local meat producers by protecting them from unfair foreign competition of meat coming from the EEC countries.

1.5 Description of the proposed pricing system:

Based on observed import prices and on the knowledge of the world and local meat situations, a commission will determine an import reference price for the various types of meat. This reference price will be the sum of an average of past CIF prices, the different duties and tariffs, the transit and operating costs of the importers as well as the wholesale profit margin. This resulting reference price will then be compared with an indicative local price for similar meat. Any positive difference between the reference import price and the local indicative price will be the levy that will be imposed on the imported meat. This levy will be determined every quarter in order to take into account the changes in the local and foreign markets.

Using 1987 data, it was estimated that this system would have caused CAPA retail price to increase from 630 to 770 CFAF/Kg. Local beef price would have increased to 980 CFAF/Kg below the indicative local price, 1100 CFAF/Kg. For beef, close to 2.3 billion CFAF or 15.5 percent of the retail value of the total beef sold in the Cote d'Ivoire would have been collected through the variable levy system. In June 1990, the Ivorian authorities adopted this pricing system. However, details on its implementation are not yet available.

Section 2 Beef Demand Equation for the Cote D'Ivoire

Economic theory suggests that the demand for a good is a function of the price of this good, the price of the substitutes and/or complements, income and population. During the 1970s, several researchers studied the demand for meat in Cote D'Ivoire. These studies have identified the price of beef, the price of fish, changes in income, population and urbanization to be the main variables that influence demand for beef. The lack of good data on the explanatory variables prevented a quantitative estimation of the Ivorian beef demand function. However, Delgado and Staatz (1980) estimated the income elasticity to be between .6 and .7. Shapiro using data from Abidjan, found that the elasticity of substitution with respect to fish was .38. This relatively high cross-elasticity indicates that consumers of beef are very sensitive to the price of fish. As the price of fish decrease relative to that of beef, consumers substitute fish for beef in their diet.

In the present study, knowledge of the sector and economic theory are used to construct the following model of the Ivorian beef sector in Cote D'Ivoire:

$$Qd = C + a\ Pb + b\ INC + c\ Pf + d\ POP$$

where,

Qd is the annual consumption of beef in Cote D'Ivoire, tons carcass,

Pb is the average real price of beef in Cote D'Ivoire, INC is the real GDP in Cote D'Ivoire, Billions of CFA,

Pf is the average real price of fish in Cote D'Ivoire, CFA/Kg,

POP is the population variable for Cote D'Ivoire, millions of inhabitants,

a, b, c and d are the parameters to be estimated, and C is a constant term.

Estimation Results

The above model was estimated by Ordinary Least Squares (OLS) method using data from 1980 to 1988 (table 2). Poor information on the rate of urbanization did not permit the use of this variable in the estimation. Surprisingly, the fish variable was not statistically significant. This variable was then excluded from the equation. Estimation of the new model gave the following results:

$$\begin{array}{lllll} Qd = 73.8 & - .11\,Pb & + .015\,INC & + 2.95\,POP \\ (3.43) & (-6.76) & (2.79) & (3.25) \end{array}$$

$R2 = .97$; $DW = 3.52$; $n = 9$

The above result suggests that 97 percent of the variation in beef demand could be explained by changes in the price of beef, population growth and fluctuations in income. More specifically, it is found that a one percent decrease in beef price triggered a 1.21 percent increase in demand. A one percent increase in income leads to a .68 percent increase in beef demand and finally, a one percent increase in population is associated with a .41 percent increase in the demand for beef. The goodness of fit of the estimated equation indicates that the three variables, real beef price, real income and population, constitute the main explanatory variables in the beef demand equation. Consequently, they will be used in conjunction with the estimated demand equation to predict future changes in the demand for beef.

1.7 Simulation:

The estimated parameters of the demand function coupled with projection of change in population, income and beef price are used in this section to forecast beef demand for the period 1991-1995.

Table 3 shows the assumptions regarding future changes in the explanatory variables. It is assumed that the Ivorian authorities will succeed in increasing beef retail price through the pricing system described above. This system seeks to promote domestic production and encourage cattle imports from the Sahelian countries. It is expected that the new pricing system will be implemented in 1990. As a result by 1991, beef price will increase by 20 percent from their 1988 level. In the following years, it is assumed that beef price increase at the same rate as domestic inflation.

Table 2. Times Series Data on Selected Variables

Years	Beef Consumption (tons-carcass)	Real Average Beef Price (CFA/Kg)	Population (Thousands)	Income (Millions) CFA	Real Fish Price (CFA/Kg)
1980	63,000	629.6	8,250	2,149.9	567
1981	62,000	708.6	8,500	2,336	495
1982	57,000	792.5	8,860	2524	418
1983	55,000	857.5	9,300	2653	397
1984	61,000	851	9,840	2,858	394
1985	72,000	815	10,250	3,138	543
1986	79,000	765	10,690	3,244	591
1987	76,700	744	11,140	3,118	846
1988	80,000	730	11,150	3,038	1,257

Sources: Ministere de la Production Animale de Cote D'Ivoire, Ministere du Commerce, IMF statistics

Table 3. Growth Projection for Income, Real beef price and Population (In percent)

	1991	1992	1993	1994	1995
Income	-2.5	0	0	0	0
Real Beef Price	20	0	0	0	0
Population	9	3	3	3	3
Beef Consumption	22	1.23	1.23	1.23	1.23

The 1991 figures represent changes relative to 1988 levels.

Table 4. Change in Beef Demand Based on World Bank projection for Income (In percent)

	1991	1992	1993	1994	1995
Income	-1.0	1.5	2	2.5	3
Real Beef Price	20	0	0	0	0
Population	9	3	3	3	3
Beef Consumption	-21.19	2.25	2.59	2.93	3.27

The 1991 figures represent changes relative to 1988 levels.

With regard to economic growth a zero growth rate is assumed during the period 1992-1995. Finally, for the period 1991-1995 population is assumed to grow on average by 3 percent per year down from the 3.5 to 4 percent yearly growth rate of the 1980s. Indeed, it expected that economic slowdown will reduce immigration from neighboring countries and number of Ivorians and foreigners will probably leave the country in search of better job opportunities elsewhere. This, coupled with government efforts to curb population growth, especially urban population, may lead to a lower growth rate in the 1990s than in the 1980s.

Using the assumptions outlined above along with the estimated beef demand function, it is projected that in 1991 beef consumption in Cote D'Ivoire will decrease by 23 percent relative to its 1988 level, to stand at about 62,000 tons carcass. This decrease will result from a 20 percent increase in beef price and 2.5 decline in GDP and a 9 percent growth in population relative to their respective 1988 level. In subsequent years (1992-1995), beef demand will increase on average by 1.2 percent every year. Consequently, during the first half of the 1990s, price increase as well as reduction in income will probably work together to limit growth in beef demand to only 1.2 percent a year down from 7 percent during the second half of 1980s.

Alternative forecasts based on the World Bank/IMF forecasts of GDP are presented in table 4. The World Bank/IMF projections assume that the Cote D'Ivoire successfully implements the stabilization measures proposed by the Fund in 1989. Hence after declining in 1989 and 1990, respectively, economic growth will resume with GDP growing by 2.4 percent on average during the period 1992-1995. Economic growth combined with population increase will lead to an average yearly increase of 2.7 percent in beef demand over the period 1992-1995. This is an optimistic forecast.

From the above analysis, it appears that in the future the traditional determinants for beef demand will constitute limiting factors for growth. Increase in beef demand will come mostly as a result of growth in population. The reduction of the stock of beef in the EEC coupled with the protectionist policy in Cote D'Ivoire will lead to a price increase which in turn will induce a reduction in imports from Europe. Price increase and economic recession will work together to reduce overall beef consumption. It is expected that domestic production will continue to increase at the same rate as in the 1980s, 4 percent per year on average. Despite this relatively high growth rate, the low starting level of domestic production (15,000 tons carcass in 1985) suggests that the Cote D'Ivoire will continue for a long time to depend on imports to meet its beef demand. Cattle imports from the Sahel will gradually increase, partly substituting for European beef. However, in the context of declining demand (income effect) the extent to which import increase from the Sahel will depend on the degree to which production and marketing costs can be reduced.

Section 2: Mali cattle sector:

During the 1980s, Malian cattle exports to Cote d'Ivoire have declined drastically. They went from about 24,000 tons carcass in 1980 to only 15,000 in 1988. Several factors in the production and marketing systems as well as some aspects of the Mali government policies may explain in part this decline in exports. In this section, these factors will be reviewed and analyzed.

2.1 Livestock production system:

Livestock sector in general and cattle subsector in particular is dominated by a traditional production system based on range grazing and the exploitation of natural resources. Herd management is closely linked to climatic and ecological conditions. Two types of livestock production system co-exist in Mali. The transhumance system predominates in the Sahel region in the north of the country. During the dry season, cattle are driven south in search of water and pasture. Such journeys corresponds to a period of weight loss. The animals are forced to walked over very long distance, and in the south the quality of the pasture is poorer than in the north. The period July-October is characterized by a northern movement of the herds to their traditional grazing land. The Sahel zone is mainly populated by the zebu breed. Zebu cattle is tall, relatively drought resistant but highly susceptible to diseases such as trypanosomiasis. As a result, these animals can hardly live in the humid south infested by tse-tse flies. In 1988, cattle population in the North was estimated at about 1.9 million or 41 percent of the total population. In recent years, there has been a general displacement of cattle herds from the north to the south. This displacement came as a result of the degradation in the vegetative cover and poor rainfall in the north. This southward displacement was also facilitated by the fact that climatic changes in Mali rendered the south less humid with fewer tse-tse flies. In the Soudanian and Guinean zones which includes such cities as Segou, Koulikoro and Sikasso, the principal herd management system is the sedentary system. The animal kept around the villages are fed with crop residues most of the year. However, at the beginning the rainy season the animal taken on short distance transhumance away from the crop lands. The soudanian and the guinean zones are mostly populated by the N'Dama breed which has a smaller frame and is less drought resistant than the Zebu. However, the N'Dama cattle is more trypano-tolerant. In these zones, the total cattle population is estimated at 2.7 million or 59 percent of Mali total cattle population, up from 42 percent in 1980.

2.2 Constraints to Cattle production and Exports:

Except from the few differences outlined above both the transhumance and the sedentary systems are very traditional in nature. Both systems are low input-low output systems that rely heavily on the natural resources and traditional herd management. Climatic changes, agricultural development along with population pressure have contributed to reduce the quantity as well as the quality of natural pasture available in Mali.

Number of observers indicate that the current production system constitute a threat to the environment and to livestock production itself. Livestock productivity in Mali is very low and has been declining. It is estimated that between 1978 and 1983, the mean weight of mature oxen and cows have declined by 84 and 30 Kg, respectively. In general, productivity parameters in the livestock sector in Mali compare poorly with similar parameters in other livestock producing countries in Latin America. Experimental research in Mali indicates that through better nutrition and health care, substantial increase in productivity could be achieved.

2.2.1 Drought:

During the 1980s, cattle supply and exports have decreased substantially in Mali. Several factors can explained this decline. In 1983-1984, Mali has been hit by a drought which caused the death of a number of animals. Cattle raisers were forced to sell their animals or walked them southward to the north of Cote D'Ivoire. According to Malian official figures, cattle population decreased from 6.653 million in 1982 to 5.667 million in 1983, a 15 percent decline. In subsequent years, Mali cattle population continued to decline until 1985 where it stabilized at 4.314 million. Starting in 1986 growth resumed, however, by 1988 cattle number represented only 70 percent of its pre-drought level. Malian figures indicate that during the same period, cattle export decreased by one half from 423,000 in 1984 to only 210,000 cattle in 1987. Undoubtedly, the 1983 drought explain part of this decline in exports. However, discussions with market participants and government officials suggest other causes to the drop in cattle exports.

2.2.2 Monetary policy:

In 1984, Mali joined the Union Monetaire Ouest Africain (UMOA) and in the process adopted the CFA franc as official currency. Before 1984, the official currency, the Malian franc, was worth .5 CFA franc. This currency change came with no adjustment in domestic prices except in the public sector. This sudden reevaluation of the currency contributed to reduce the profitability of Mali exports. Indeed, the price of cattle which was 120-130,000 Malian francs or 60-65,000 CFA before 1984 increased to 120-130,000 CFA, and this without any corresponding increase in quality. This doubling in cattle purchase price could not be passed on to the consumers in Cote D'Ivoire. As a result, the profit margin of the various participants in the export channel decreased substantially and at time turned negative explaining in part the high level of indebtness and bankruptcy among participants in the export channel and the subsequent reduction in cattle exports. In 1980, Delgado and Staazt indicated that the purchase price of the cattle represented about 75 percent of the selling price of the animal in the Cote D'Ivoire. Rough calculation based on information obtained from exporters in Mali indicate that today, the purchase price in Mali represents close to 85 percentof cattle price in Cote D'Ivoire.

2.2.3 Government rules and regulations:

There are number of government rules and regulations that appears to be serious impediments to efficient cattle exports. These rules and regulations range from cumbersome administrative requirements to the relatively heavy taxation supported by cattle exporters. Despite the recent attempt (June 1989) by the government to streamline the export procedure, exporters in general and more specifically cattle exporters have to go through several lengthy and potentially costly steps to obtained various authorizing documents. Exporters are required to obtain either documents or approval from seven different offices. Merchants indicated that these steps are costly both in time and money. Very often in order to speed up the process, they have to pay extra fees. It is difficult to estimate the cost for the exporters of such a system. However, it is clear that the cost is high enough to induce exporters to engage in illegal trade, and therefore accept the high risks of being caught at check points. It is estimated that more than half of the cattle exports evade the formal sector.

Various fees and taxes are associated with the administrative requirements mentioned above. For example, a typical cattle exporters have to pay about 110 CFA in license fees in order to export one cattle. In addition, he has to obtain an export certificate (50 CFA francs per animal) from OMBEVI. The exporter must also obtain from the Direction National de l'Elevage the health certificate which cost 150 CFA francs per animal. He has to buy a set of forms (350 CFA francs) at the Chamber of Commerce to be filled and submitted to DNAE. Cattle exporters also pay a fixed direct tax of 23,000 CFA francs or about 462 CFA francs per animal. They have to pay export tax (2,000 CFA francs per animal) and State surtax (Contribution pour Prestation de Services) which amount to 3 percent of the value of the animal or 1,500 CFA francs per animal (based on official market price of 50,000 CFA francs). Finally, the exporters have to obtain a bank account certificate which cost 3,000 CFA francs. Consequently, cattle exporters pay about 4,094 CFA francs per animal in official fees and taxes. This represent about 17 percent of the marketing cost.

2.2.4 Illegal taxes:

In addition to the above official taxes, a number of illegal taxes constitutes serious barriers to trade and may discourage the private sector initiative in the livestock sector. Traders interviewed in Mali have indicated that the illegal taxes constituted a major impediment to their activities. They indicated that in Niele and Bougouni they have to pay about 400 and 500 CFA francs per animal to the health agents, respectively. To the police and custom agents, they pay per animal about 200 CFA francs in Bamako, 170 CFA F in Senou, 200 CFA F in Bougouni, 230 CFA in Sikasso, 170 CFA F in Zegoua and 220 CFA F in Poko at the border between Cote D'Ivoire and Mali. Hence from Kati to Poko, cattle exporters have to pay about 2100 CFA francs in illegal taxes per animal.

No precise information was obtained on the illegal taxes exacted by the health and law enforcement agents in Cote D'Ivoire. However, it is estimated that in Cote D'Ivoire, cattle traders have to pay at least the same amount per animal in illegal taxes. Consequently, it is approximated that cattle exporters are forced to pay a minimum of 4,200 CFA francs (19 percent of the total marketing cost which is estimated at 22,100 per animal trucked to Abidjan) per animal in illegal fees between Mali and Cote D'Ivoire.

The above analysis indicates that in the future Mali cattle exports to the Cote D'Ivoire will be constrained by demand in Cote D'Ivoire and production as well as marketing cost. There are number of short and long term actions that can be taken by both the Malian and the Ivorian authorities to reduce marketing cost and promote cattle trade between the two countries.

2.3 Policy Recommendations:

The preceding section have identified number of factors impeding efficient and profitable cattle export to Cote D'Ivoire. This concluding section will outline several short term and medium term actions that can be taken to promote Malian cattle exports:

2.3.1 Short term actions:

The livestock development strategy of the Cote D'Ivoire is based for substantial part on the trade of animals from the Sahel, namely from Mali and Burkina Faso. The Ivorian authorities have invested substantially in trade corridors, water points, pasture land and veterinary services to induce some of the Malian cattle raisers to settle in the north of the Cote D'Ivoire. In addition several accompanying processing activities have been encouraged to take advantage of the substantial movement of animals from the Sahel. These activities include animal feeds, animal slaughter, tanning and animal transports. From 1975 to 1988 close to 75 billion CFA francs have been invested in the sector. Starting in 1984, subsidized beef from Europe has partly replaced Sahelien beef in Ivorian beef supply, hence endangering the success of the Cote D'Ivoire livestock promotion strategy. Consequently, the Ivorian authorities are taking steps to reduce the share of the European beef in domestic consumption. Such steps consist mainly in increasing the price of meat import to level comparable to that of the domestic production. It is expected that such step by making European beef more expensive, will protect domestic production and imports from the Sahel.

To further promote cattle export, the Malian and Ivorian authorities should take actions to reduce marketing costs. In particular, both sides should cooperate to eradicate the illegal tax system. In both countries, the authorities should voice their opposition to these practices and announce stiff penalties against those who engage in such practices. The elimination of the illegal taxation will go a long way toward increasing the profitability of the cattle trade to Cote D'Ivoire and promote competition by eliminating one important barriers to entry. For example, both Ivorian and Malian authorities may decide to reduce the number of check points, and broadcast the number and locations of these check points as well as the nature of the check.

The government of Mali can further promote cattle export to Cote D'Ivoire by reducing or temporarily eliminating export taxes. Indeed, given the difficulties faced by Malian exporters (economic recession in the major market, drought and unfair competition from Europe), the government should support them by eliminating the export taxes. The elimination of the export taxes by reducing marketing cost will improve the competitiveness of Malian beef in Cote D'Ivoire and as a result may increase the share of Mali beef in total Ivorian beef supply.

The government in Mali should further simplify the administrative procedure for exporters. In particular, a one-stop shop approach should be instituted for example at DNAE where all the administrative requirements will be initiated and performed. Such simplification in addition to saving time to the exporters, will reduce the opportunities for rent seeking behavior on the part of the government agents. This institutional reorganization should contribute to reduce marketing cost and hence improve the competitiveness of Malian cattle in foreign markets.

Discussion with the public officials and the market participants in Mali indicated that since 1984, major changes have occurred in the structure of the livestock industry. These changes relate to the structure, conduct and the performance of the livestock industry. For example, since 1984 the price of cattle has increased in most Malian markets with no apparent change in quality. As indicated above this price represents close to 85 percent of the selling price in Abidjan up from 75 percent in the early 1980s. In addition, it is reported that number of market participants have gone bankrupt or are highly indebted. Finally, major change albeit slow are occurring in cattle production. One such change is the increased share of sedentary production system relative to the transhumance system. This may have tremendous consequences for the productivity of the cattle sector and open opportunities for intensifying the cattle production in Mali. Several hypotheses have been evoked to explain these changes. They range from the effects of the drought on the supply of animal and the number of cattle raisers as well as their production practices to changes in bargaining power among market participants and inappropriate marketing facilities. It is important that the government commission a comprehensive study to investigate the impact of these changes on the cost structure in the cattle sector including marketing. Such study will review the production as well as the marketing system in light of the various changes that have occurred in the 1980s in the Malian livestock sector. The result of the study will permit to make policy recommendations aimed at improving the efficiency of the system and increasing the productivity in the sector.

The disorganization of the cattle export channel between Cote D'Ivoire and Mali and the corresponding loss of accompanying activities are major sources of concerns for both Malian and Ivorian authorities. One of the most damaging effects of this disorganization is the loss of confidence among market participants whose activities are traditionally based on trust. Default on loans has reportedly contributed to increase financial cost in the informal sector and reduce the availability of credit for cattle traders as well as meat wholesalers and retailers. This situation which is the consequences of the changes in the cattle trade sector may constitute a limiting factor to cattle and meat marketing. The government of both Cote D'Ivoire and Mali should contribute to reestablish business confidence in the sector. In particular, they should facilitate business contacts among cattle and meat traders and facilitate the establishement of fund by the private traders to guaranty transactions between Cote D'Ivoire and Mali.

3.3.2 Medium Term Actions:

A) Diversification:

The reliance on one export market is not a viable situation for Mali cattle sector. The changes that have occurred in Cote D'Ivoire during the 1980s emphasize the need for Mali to diversify its export markets for cattle. In particular, Malian authorities should prospect export opportunities in Senegal, especially in view of the recent political problems between Senegal and its traditional supplier, Mauritania. Other markets to be prospected include Ghana, where economic recovery suggests that the demand for animal protein may increase in a near future, and Guinea where population growth and rapid urbanization may lead to increase in beef demand. However, the viability of these markets is associated with the ability of cattle raisers to increase productivity and traders to reduce marketing cost in order to reduce overall beef price to level affordable for the population of the above mentioned countries.

B) Intensification of the livestock production:

The brief review of the Malian production system indicates that livestock production is highly dependent on climatic and ecological conditions. In recent years, droughts have substantially reduce the quantity as well as the quality of the natural pasture and the availability of water points for livestock. In addition, the competition between livestock and agricultural producers for land poses a serious threat to the environment and the sustainability of the livestock production. These elements reduce the reliability of Malian cattle supply and may at term undermine the confidence of such traditional importing countries as Cote D'Ivoire. It is therefore urgent that Malian livestock authorities promote few changes in the production sector aimed at decreasing the reliance on the natural resources, reducing the fluctuations in cattle supply and increasing the productivity in the sector. Few of the actions that can be undertaken by the public authorities include: 1) study and implementation of a land reform program that will determine well defined zones throughout the countries for the use of livestock production. The government should also define the conditions of resource use in these zones with in mind the protection of the environment. 2) Intensification of livestock production in mixed farming system, especially in the soudanian and guinean zones in the south where agricultural residues and by-products may constitute valuable inputs for livestock production. The government should study the feasibility of small scale fattening operations and associated activities such as cultivation by farmers of improved forages. 3) Efforts should be made to promote among livestock producers simple herd management techniques including feeding and health care.

C) <u>Strengthen the institutional capacity of the various government structures dealing with livestock production and marketing</u>:

Casual observation of the working relationship among the various offices responsible for livestock in Mali tends to indicate that little coordination exist among them. It took about 2 weeks to the Centre Malien du Commerce Exterieur (CMCE) to find out whether or not the government had reduce the export tax on cattle as it was reported. Official at OMBEVI and DNAE could not give a firm answer either. In addition, it appears that these government structures have very limited capacity to collect and analyze relevant data pertaining to the sector. The restructuration of the livestock sector called for above will requires the strengthening of the analytical capacity of the institutions responsible for policy formulation and implementation.

List of Persons contacted

Mali

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