



Policy Briefing Paper

**HOW TRADE LIBERALIZATION CAN CONTRIBUTE TO
RESOLVING THE CRISIS IN THE BEEF AND CATTLE
SECTOR**

Keith Jefferis

May 2005

Abbreviations

BCPA	Botswana Cattle Producers Association
BMC	Botswana Meat Commission
CAP	Common Agricultural Policy
CBPP	Contagious Bovine Pleuropneumonia
CDM	Cold Dressed Mass
CSO	Central Statistics Office
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FMD	Foot and Mouth Disease
GDP	Gross Domestic product
NDP	National Development Plan
SPS	Sanitary and Phytosanitary Standard
TGLP	Tribal Grazing Land Policy
USAID	United States Agency for International Development

Exchange Rates as at May 10 2005: **BWP 1 = USD 0.2189**
USD 1 = BWP 4.57

**This paper was prepared under the Trade Facilitation and Capacity Building
Project of the Southern African Global Competitiveness Hub**

HOW TRADE LIBERALISATION CAN HELP TO REVITALISE BOTSWANA'S BEEF AND CATTLE SECTOR

KEITH JEFFERIS¹

1. INTRODUCTION

- 1.1. The cattle and beef industry has traditionally played an important role in the Botswana economy and society, with significant contributions to GDP, exports, and employment, as well playing an important social and cultural role. In recent years, however, there have been signs of decline and stagnation, especially in the beef export sector, with adverse implications for the viability of cattle farming in the country, and more generally for rural livelihoods. Within the industry, a central role has been played by the Botswana Meat Commission (BMC), a state-owned company that has a monopoly on beef exports and which also receives protection from a statutory ban on live cattle exports. Notwithstanding the fact that Botswana receives privileged access to the high-price European Union (EU) market, the main destination for BMC's exports, there is a growing crisis in the beef and cattle sector: throughput at BMC's abattoirs is declining, BMC is making losses, and prices paid to farmers are declining in real terms. If present trends continue, prospects for the beef and cattle sector are poor. As a result, it is widely acknowledged that major changes are needed, encompassing the management and operation of BMC, beef/cattle marketing arrangements, and raising the productivity of cattle farming operations, if the industry is to thrive, indeed to survive.
- 1.2. The beef and cattle sector is probably the most heavily protected economic activity in Botswana, in that, apart from BMC's beef exports, international trade in beef and cattle is prohibited. As a result, the normal forces of competition that result from trade are largely absent, thus reducing competitive pressures on the industry – particularly the beef producing sector – to be efficient. This paper examines the likely impact of trade liberalisation the beef and cattle sector, and considers whether this can support the drastic reforms that are necessary if it is to survive and thrive in the future. In particular, it considers the likely impact of recent proposals for the liberalisation of cattle marketing arrangements, specifically for the removal of the existing ban on live cattle exports, that have been made by the embryonic Botswana Cattle Producers Association (BCPA).
- 1.3. This policy briefing paper evaluates whether the proposed changes would have a beneficial impact on the cattle and beef sector and the economy as a whole. The remainder of the paper is divided into two main sections. Section 2 sets out the current state of the cattle and beef sector, and identifies a range of problems affecting it, while Section 3 evaluates the likely impact of trade liberalisation the sector, and makes recommendations for the way forward. The broad conclusion is that allowing live cattle exports would enable cattle farmers to realise higher prices and would stimulate changes to farming practices and herd management that would enable higher productivity, higher offtake, and improved supplies to the BMC along with

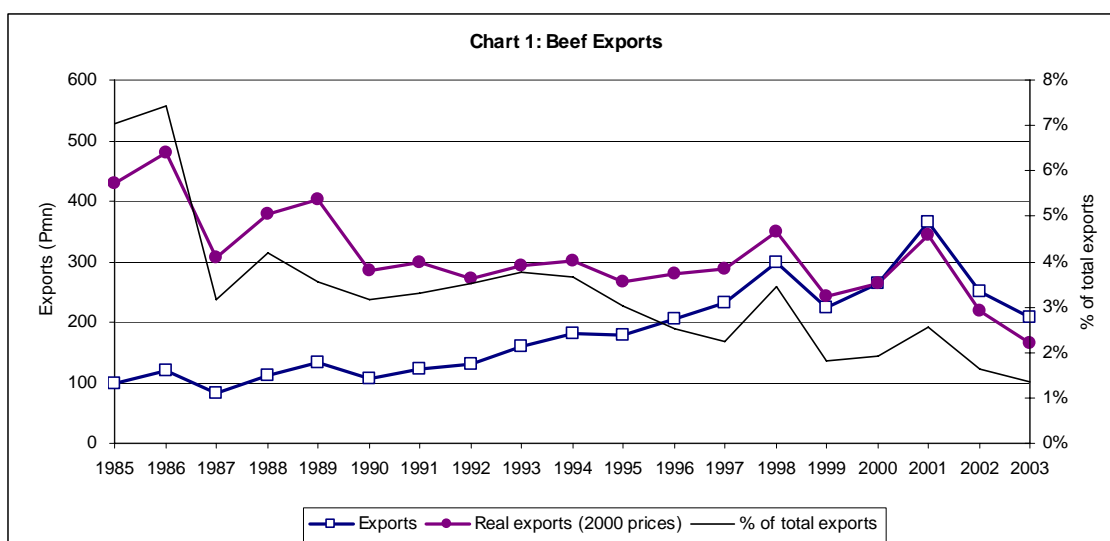
¹ Econsult Botswana (Pty) Ltd (www.econsult.co.bw), consultant to the Trade Facilitation and Capacity Building Project of the Southern African Global Competitiveness Hub (www.satradehub.org). Valuable assistance was provided by Monnanyana Bingana of MSB Consulting (Pty) Ltd.

live cattle exports. Should these changes be realised as anticipated, the benefits would be increased export earnings from cattle and beef, higher incomes for cattle farmers, the restoration of profitability for BMC, and the stimulation of the rural economy.

2. OVERVIEW OF THE CATTLE AND BEEF SECTOR

(a) *Economic Role and Impact*

- 2.1. **Cattle industry historically important but has experienced long-term decline in economic terms.** The cattle and beef sector has historically been extremely important for Botswana. At independence in 1966, agriculture accounted for some 40% of GDP, more than half of which was due to cattle rearing. The BMC abattoir at Lobatse was the only significant manufacturing activity in the country, and beef was the only significant export commodity. Since the late 1960s, however, agriculture in general has declined, and the real value of agricultural output was no higher in 2003/04 than it had been in the mid-1970s, which suggests that there has been no real growth in the value of cattle output over a thirty year period. Agriculture accounted for 2.3% of GDP in 2003/04, of which approximately two-thirds was related to cattle production. By 2004, beef exports amounted to P284m, or 1.7% of total exports of P16.2 billion. Beef was only the fifth largest export commodity (after diamonds, copper-nickel, textiles and vehicles & components). Taken together, cattle and beef now account for approximately 2%-3% of GDP. Employment data from surveys of formal sector employment and the 2001 national census suggest that approximately 24 000 people, around 4%-5% of the labour force, were occupied in agricultural employment, both formal and informal, of which the majority are likely to be employed in the cattle sector.



- 2.2. **The industry remains important to the rural economy.** The importance of the cattle and beef sector is, however, likely to be greater than that implied by macroeconomic statistics and employment data. Its main importance is in relation to the rural economy. For reasons of climate and geography, most of rural Botswana is sparsely populated, and has limited potential to support viable income-generating economic activity. As a result, there has been a long-term process of rural-urban migration, as the population seeks more attractive economic opportunities in the urban areas; the majority of Botswana's population is now urban. Nevertheless, the proportion remaining in rural areas, around 45%, is significant. The main economic activities in the rural areas are cattle rearing, arable agriculture, tourism, retail trade, small-scale industry, and the provision of government services (education, health, administration etc.). Of these, arable agriculture and small-scale industry have little potential outside of those areas close to large population centres, while retail trade and government

services are dependent upon other sources of income generation. Tourism and cattle-rearing are, therefore, the main income-generating activities in the rural areas, and while tourism undoubtedly has long-term potential, it requires further development and at present it is largely limited to the northern areas of the country. For much of the country, therefore, cattle rearing is the mainstay of rural income generation. Given that the rural areas are also heavily dependent upon public and private transfers (such as old age pension payments, orphan and other welfare payments, and remittances from extended family members working in urban areas), a healthy cattle sector is crucial to maintaining some form of economically viable population presence in the rural areas, and mitigating the pace of rural-urban migration.

- 2.3. **The industry is also has social and cultural importance, as well as for citizen empowerment.** The cattle sector is also important for other reasons. Cattle continue to be the primary form of wealth accumulation for large segments of the population, including many of those resident in urban areas, partly because of their continuing cultural importance. Furthermore, the cattle industry is the only industry in Botswana that, at all levels, is predominantly owned by citizens; and, although the very poor tend not to be cattle owners, the industry is in general important to citizens across a wide range of income levels and socio-economic groups. According to 1996 data, there were approximately 60 000 cattle production units in the country, 99% of which were in the traditional sector². With a total of approximately 291 000 households recorded in Botswana in 1994³, this implies that some 20% of households were directly involved in cattle rearing (although not necessarily as their primary economic activity or income source).

(b) ***Organisation of the Industry***

(i) *Beef*

- 2.4. **BMC plays a central role in the industry.** The most important institution in the beef sector is the Botswana Meat Commission (BMC), which operates EU-accredited export abattoirs in Lobatse and Francistown. The Lobatse abattoir was established in 1954 by the (then) Colonial Development Corporation (CDC), and was purchased by the Bechuanaland Protectorate Government in 1965, just prior to independence. The BMC was established as a statutory corporation that remains owned, and, largely, controlled by Government⁴. The Francistown abattoir was opened in 1990. The BMC also operated a small abattoir in Maun between 1983 and 1996, although this was never accredited for exports to the EU, due to its proximity to the endemic foot and mouth disease (FMD) zone; the Maun abattoir was closed following the outbreak of Contagious Bovine Pleuropneumonia (CBPP), which led to the slaughter of all cattle in Ngamiland, the main affected area, which used to supply most of the cattle slaughtered by the Maun abattoir.

- 2.5. **The EU is the main market, with above world market prices.** The majority of BMC output is sold as chilled or frozen boneless beef into the EU, where Botswana has a quota of 19 000 tonnes a year under the beef protocol which derives from its status as an ACP state under the EU-ACP Cotonou Agreement (formerly the Lome

² CSO (1996) *Agriculture Statistics:1996*. (Central Statistics Office, Gaborone), quoted in Burgess, J. (2002) *Country Pasture/Forage Resource Profiles* (Rome: UN Food and Agriculture Organisation (FAO)).

³ CSO (1995) *Household Income and Expenditure Survey: 1993/94* (Central Statistics Office, Gaborone)

⁴ Botswana Meat Commission Act (Cap 74:04), commencement date December 24, 1965. While mandated to carry out its activities in an efficient manner, it is not intended to be profit-maximising. Any surplus revenues at the end of the year are distributed to cattle producers as a bonus proportional to their sales to the BMC.

Convention). This quota essentially enables Botswana to sell beef into the EU market without paying most of the import duties that are generally applicable to countries exporting beef to the EU, and thereby benefiting from EU beef prices which are substantially higher than world market prices for beef.

- 2.6. **BMC is protected from export competition.** Besides the BMC, there are a several privately owned and local council abattoirs, as well as a large number of local butcheries that undertake slaughter. These are all restricted to supplying the domestic market, however, as the BMC Act gives BMC a monopoly over the export of beef and related products. The BMC Act also prohibits the export of live cattle⁵. The import of beef is also prohibited. The EU quota – which is specific to Botswana – also means that the BMC faces little or no competition in the EU from other beef exporting countries.
- (ii) *Cattle*
- 2.7. **National cattle herd mostly on communal land, and has been declining in size, although data is poor.** Cattle production is classified as either “commercial” or “traditional”, depending on whether the cattle are raised on privately owned freehold land or communal (tribal) land. The distinction is to a certain extent artificial, as the larger farmers on communal land are “commercial” (or at least quasi-commercial) in their outlook and farming practices, especially on farms which, notwithstanding their being on communal lands, have been fenced under TGLP or subsequent policies⁶. About 80-90% of the national herd is thought to be held on communal land.
- 2.8. Data from the CSO indicates that the size of the national cattle herd has fluctuated around 2.5 million in recent years, down from 3 million in the early 1980s, with changes reflecting the impact of climatic conditions (especially rainfall/drought), disease (CBPP, FMD) and market conditions⁷. Data from the FAO, however, indicates a long term decline from the early 1980s to the present, with the national herd stabilising at around 1.7 million⁸. This conflict illustrates a broader problem of poor quality statistical data on agriculture in general, and cattle in particular.
- 2.9. **Overall productivity levels are low, and there is concern about environmental degradation.** The traditional sector as a whole is characterised by low productivity, in the form of low calving rates, low offtake rates, and high death rates compared to the commercial sector. For instance, calving rates in the traditional sector average around

⁵ The relevant clauses of the BMC Act are as follows:

21(1) No person other than the Commission shall export cattle or edible products from cattle from Botswana unless he is in possession of a permit in writing to do so issued by the Minister under this section.

(2) No such permit shall be issued without the concurrence of the Commission or unless the Minister declares by order published in the Gazette that by reason of exceptional circumstances it is in his opinion clearly in the public interest to issue such a permit without the concurrence of the Commission.

(3) Notwithstanding the provisions of section 29 of the Control of Livestock Industry Act the President shall not license any slaughter-house as an export slaughter-house in pursuance of that section unless that slaughter-house is operated directly, indirectly or in association with others, by the Commission.

⁶ Burgess (2002) *op. cit.* gives further useful details on commercial and traditional cattle farming systems in Botswana.

⁷ CSO Agricultural Statistics (www.cso.gov.bw)

⁸ FAO website (<http://faostat.fao.org>)

50%, compared to 60%-80% in the commercial sector, while offtake rates of 7%-10% in the traditional sector compare to 15%-20% in the commercial sector⁹.

- 2.10. Concerns have also been raised about stocking levels relative to the carrying capacity of rangeland, especially in communal areas. While the carrying capacity varies according to climatic conditions and drought/rainfall cycles, there is evidence that some parts of the country have been adversely affected by overstocking, overgrazing and resultant environmental degradation. Communal land is particularly vulnerable to problems of overgrazing, for well-known “tragedy of the commons” reasons. As a result, any significant increase in the national herd above 2.5 million would have to be accompanied by changes in herd and range management practices if more severe overgrazing problems are to be avoided.
- 2.11. **The Botswana cattle sector is based on an oxen production system, as distinct from a more modern weaner production system. The latter has higher productivity as well as a reduced environmental impact.** Feasible stocking levels and the environmental impact of cattle rearing are closely related to the type of production system employed. Broadly, production systems can be divided into two types, off-range (oxen) production systems and weaner (feedlot) systems (See Appendix A). Botswana uses an oxen production system, while more modern agricultural economies tend to use a weaner production system. In the former, cattle are raised on grass until they reach a suitable weight for slaughter (preferably over 400kg) at an age of 2-3 years. All bull-calves and the poorer heifers are raised for slaughter, while the better heifers are kept as replacement breeding cows. Non-producing cows are also culled. In the latter system, young animals are removed from the range as they are weaned (at the age of 7-9 months and a weight of 180-260kg) and are sent or sold to feedlots where they are fed intensively for 100-110 days before being sent to the abattoir. In the weaner/feedlot production system, more range is available for breeding cows and higher production (offtake) rates are possible.
- 2.12. In an oxen production system, a typical herd composition would be 30% breeding cows, 30% young stock (1-2 years), 30% calves (< 1 year) and 10% bulls and replacement heifers. In a weaner production system, typical herd composition would be 50% cows, 40% calves and 10% bulls and replacement heifers¹⁰. For a given herd size, the environmental impact is much less in a weaner production system than in an oxen production system, as a much larger proportion of the herd comprises weaner calves that consume minimal grass. Conversely, a given range can support a larger number of cattle under a weaner production system, which, when combined with the higher offtake rate, results in larger numbers of slaughter animals.

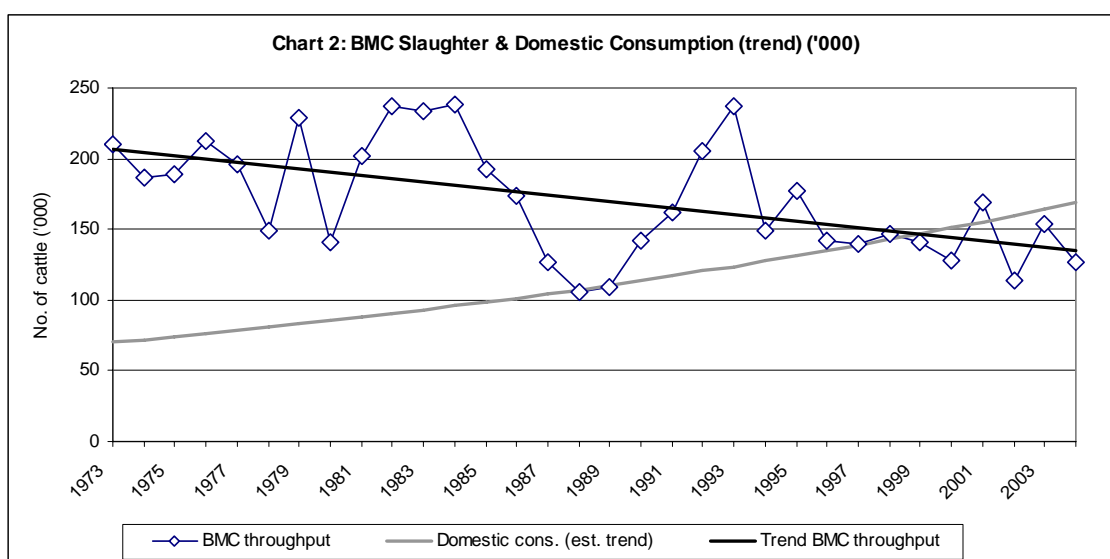
(c) *Recent trends and developments*

- 2.13. **Major problems at BMC in recent years: declining throughput, excess capacity and rising losses.** One of the dominant trends in the cattle sector in recent years is the declining throughput of cattle at the BMC, and associated declining financial performance. After being profitable for most of the period of its existence, it has made losses in five of the past six years. BMC throughput has always been volatile – for instance, falling from over 200 000 head of cattle in the 1970s and early 1980s to only just over 100 000 in 1988-89, before peaking at 237 000 in 1993 – but the long term trend has been downwards; average throughput over 2002-4 was around 130 000 (see Chart 2). This represents only around 40% of total capacity at the Francistown and

⁹ Sources: CSO Agricultural Statistics (www.cso.gov.bw); CSO 1996 Agricultural Survey; National Development Plan 9, p.181.

¹⁰ Burgess (2002) *op. cit.*, p.17

Lobatse abattoirs¹¹. Declining throughput has undermined the ability of the BMC to come anywhere near meeting the EU preferential import quota¹². Excess capacity also means that BMC's costs are too high relative to its output, thus making it uncompetitive.



- 2.14. **Declining throughput raises unit costs further.** Declining throughput has had an impact on BMC costs. As Chart 3 shows, unit costs tend to be inversely related to throughput, which is to be expected given that a substantial proportion of BMC's costs are fixed, largely independent of the level of output. As throughput declines, unit costs rise, thus undermining BMC's viability and its ability to pay competitive prices for cattle inputs.
- 2.15. **Excess capacity due to Francistown abattoir a major contributor to BMC's problems.** The excess capacity noted above has been one of the major contributors to BMC's problems, and this is primarily the result of the decision taken by BMC and government in the early 1980s to build a second export abattoir in Francistown. The Francistown abattoir, which is also accredited for exports to the EU, accounts for around one-third of BMC's total slaughter capacity¹³. However, in only one year since Francistown was opened in 1990 has BMC slaughter throughput exceeded the maximum capacity of Lobatse¹⁴, and average slaughter over the past ten years of around 147 000 is well below the capacity of the Lobatse abattoir alone. While the decision to build Francistown was based on anticipated increases in throughput, this has not in fact materialised, and the capacity at Francistown has turned out to be

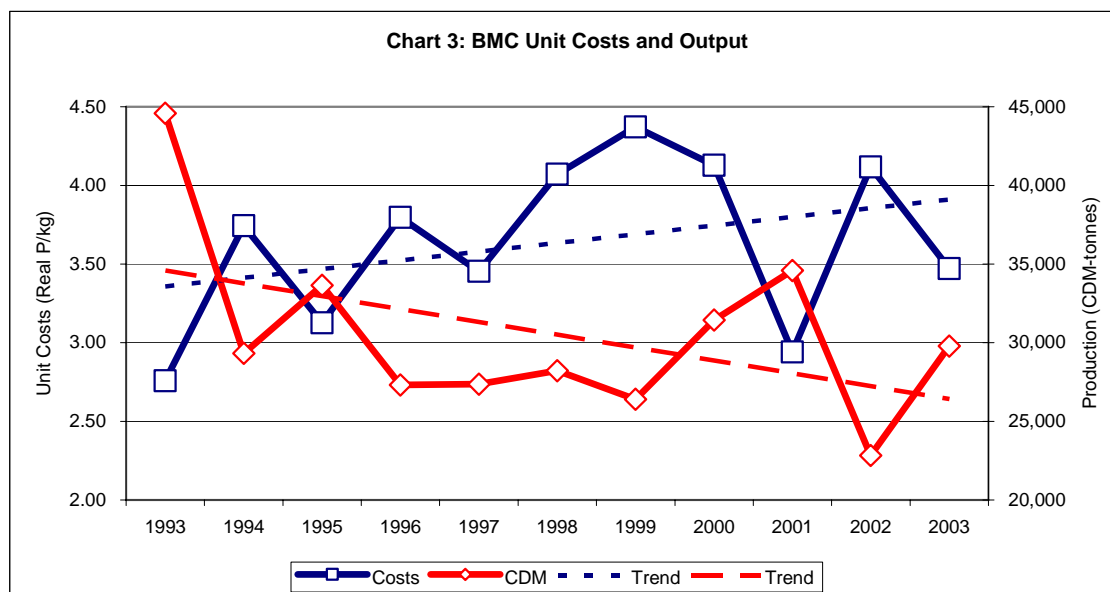
¹¹ The BMC's daily capacity is 1200 head (800 at Lobatse, 400 at Francistown), and nominal annual capacity is 240 000 head. However, this is based on less than 10 months operation a year, with an annual shutdown for "maintenance". On the basis of 52-week operation, 5 days a week, with maintenance done at weekends as per industry practice elsewhere, true annual capacity is 312 000 head.

¹² In 2003, Botswana exported 8 763 tonnes to the EU, against a quota of 19 000 tonnes (Stevens, C. and J. Kennan (2005), *Botswana Beef Exports and Trade Policy*, (Brighton: Institute of Development Studies). This was prepared as part of a broader study, funded by the World Bank, on Export Diversification for Botswana).

¹³ 400 cattle per day, equivalent to 104 000 a year at maximum (12 month working) throughput, 80 000 a year at "normal" (9.5 months working) throughput.

¹⁴ In 1993 BMC slaughter was 237 000, compared to maximum Lobatse capacity of 208 000. Additional capacity (up to 25 000) was also then available at Maun.

redundant¹⁵. Instead, Francistown has added significantly to BMC's overhead costs, reducing its ability to pay competitive prices to farmers, and contributing to the decline of the industry.



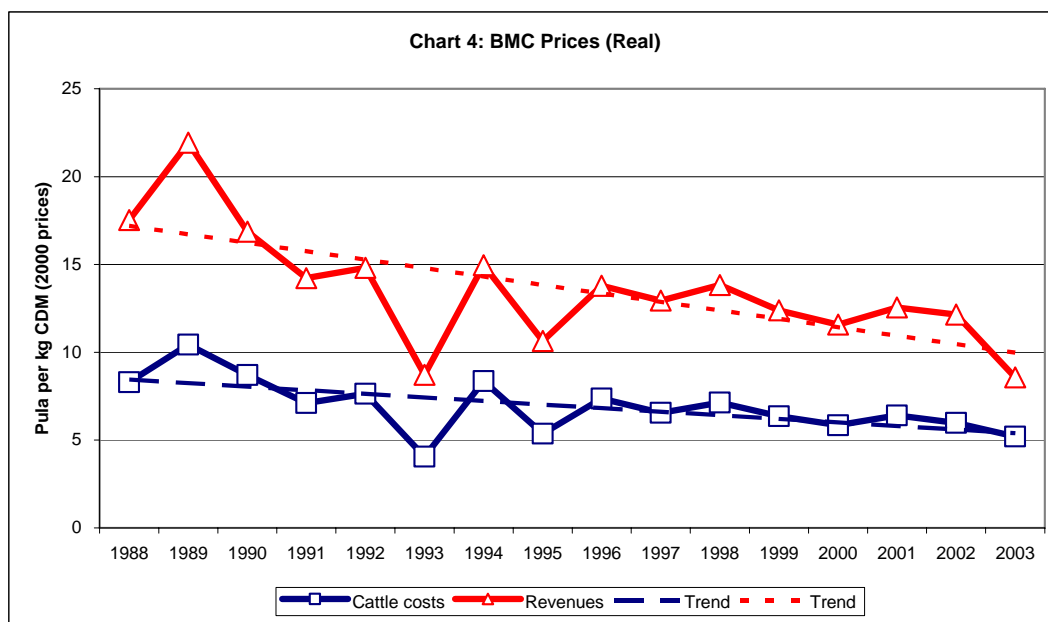
- 2.16. **Competition from growing domestic market has cut supplies to BMC, and will continue to do so.** BMC has also suffered from a rising share of total offtake accounted for by formal and informal slaughter for the domestic market, which is estimated at around 140 000 – 160 000 head of cattle per year¹⁶. What is disturbing for the BMC is that its share of total offtake has declined to less than 50%, despite the fact that domestic retail beef prices have fallen in real terms between 1995 and 2003 and that BMC offers a price premium, at least for some grades of cattle, over and above local slaughter prices. This suggests that BMC is increasingly unable to compete in the domestic cattle market, notwithstanding its access to a high price export market, because the prices it offers are insufficient to compensate for the more complicated procedures involved in selling to the BMC, and the risk to farmers of having their cattle condemned, detained or downgraded on arrival at BMC if they do not meet applicable standards. As the domestic market grows with Botswana's population, there will be steadily fewer cattle available for BMC, unless overall cattle supplies rise sharply, and/or beef imports are permitted. Hence BMC's supply problems will intensify.
- 2.17. **BMC has also suffered from declining real prices for beef in its main markets.** External price trends have put further pressure on BMC. Real prices per unit of BMC's output have declined steadily over the past 15 years, as Chart 4 shows. This is related to both market developments and the long-term decline in average carcass (CDM) weight of Botswana cattle¹⁷. BMC has therefore been squeezed between rising unit

¹⁵ The decision to build the Francistown abattoir was taken on the basis of a feasibility study carried out in 1980, and reflected a belief that capacity at Lobatse was inadequate for the country's requirements and a bottleneck to expanded beef exports (National Development Plan 6, 1985-91, p. 181, and Hartland-Thunberg, P. (1978) *Botswana: An African Growth Economy* (Boulder: Westview Press), p.43).

¹⁶ With an average 10%-11% offtake rate from a herd of 2.5 million, this gives total offtake of 250 000 – 275 000 a year, leaving approximately 100 000 – 125 000 for the BMC.

¹⁷ Heavier carcasses tend to realise a higher price per kg, other things being equal, as the proportion of bone tends to be lower.

costs (as throughput has declined) and declining unit revenues due to market price trends. These factors have combined to reduce the price paid to farmers, in real terms.



- 2.18. **BMC would be insolvent if not for Government subsidies.** Declining throughput, rising unit costs and falling real prices have contributed to the losses being suffered by BMC. The Corporation's survival so far has only been achieved by securing a government guarantee for overdraft financing, but this is only a temporary solution while attempts are made to resolve the deeper underlying problems facing BMC¹⁸.
- 2.19. **Exchange rate depreciation during the 1990s hid BMC's underlying problems, while Pula appreciation since 2002 has exposed them.** While the problems faced by the BMC have been emerging over a long period of time, they were to a certain extent disguised by exchange rate developments during the 1990s. Although EU prices for beef were roughly constant (in nominal GBP or USD terms) between 1992 and 2002, in nominal pula terms they increased significantly. The decline in real EU prices was, therefore, hidden to a certain extent. The reversal of long-term exchange rate trends with the appreciation of the pula against major international currencies since 2002 has simply served to shine the light on BMC's underlying problems, reflected in the very large loss experienced by BMC in 2003.
- 2.20. **BMC prices are now relatively low by regional standards, undermining the viability of the cattle sector, and meaning that farmers would have an incentive to export cattle (or beef) if they were permitted.** In early April 2005, SA auction prices for weaner calves up to 260kg were approximately P6.50/kg live weight¹⁹, while Namibian weaner calf exports to South Africa achieved P5.30 – P6.40 per kg at auction. If live cattle exports were permitted, Botswana weaner calves auctioned for export to SA would be likely to achieve a price between the SA and Namibia prices (the latter are lower due to transport costs, weight loss etc.), say P5.50-P6/kg. There is no comparable weaner auction system in Botswana to provide direct price comparisons, but the closest available price is from BMC's Direct Cattle Purchase

¹⁸ As the Executive Chairman of BMC was quoted as telling Lobatse Town Council on April 28, 2005: "BMC is not creditworthy . . . were it a private enterprise, it could have closed shop" (*Botswana Daily News*, May 3, 2005). The same article reported BMC having an accumulated overdraft of P160 million, with a government guarantee for P63 million.

¹⁹ As at April 8th 2005

Scheme, which currently pays P2.40/kg for live cattle from 240kg-300kg. While acknowledging that this does not quite compare like with like (weaners with potential for weight gain with lightweight cattle for slaughter), the price differential is huge - and in this example at least it can be seen that Botswana farmers could achieve a significantly higher price for weaners if allowed to export their cattle. Price differentials are also evident at the abattoir for fully grown cattle. For instance, as at May 2005, the average carcass (CDM) price across all grades of sound cattle at BMC was P6.71/kg, whereas in Namibia, the comparable export abattoir average price was P9.47/kg, approximately 40% above the BMC price²⁰.

- 2.21. Low prices paid by BMC have also made feedlots uneconomic in Botswana. As noted above, feedlots buy in weaners at 180-260kg, feed them intensively for 100-110 days, and then sell for slaughter. For feedlots to be viable, the increase in value of the animal over this period must be greater than the cost of feed and related expenses. With the low prices being offered by BMC for slaughter animals, this is not the case, and hence there is no significant feedlot purchasing to provide a market for weaners and heifers in Botswana. The only market is from BMC and other abattoirs, for fully grown slaughter animals, which have to be raised on the range.
- 2.22. The combined impact of these developments has undermined the viability of cattle rearing in Botswana. Indicative figures provided by a commercial cattle-rearing operation in Ghanzi show losses approximating 10% of turnover in 2003-04; i.e., the price realised from selling to BMC covers only 90% of the cost of rearing the cattle (without including any cost of land or capital). Such figures are reported to be indicative of the commercial cattle sector as a whole. In this environment, farmers are reported to be running down their breeding herds in order to maintain cashflow.
- 2.23. **The cattle industry in general, and BMC in particular, is facing a vicious circle of decline unless drastic measures are undertaken to restructure and improve efficiency and productivity.** The current situation can be characterised as follows:
 - BMC is in downward spiral of decline, marked by excess capacity and operational inefficiency, high overhead costs per unit of throughput, declining market prices, and low prices paid to producers. As the local market for beef grows, throughput at BMC will decline further (unless beef imports are permitted), thus raising unit (overhead) costs further, pushing BMC producer prices down, and raising BMC losses. If nothing is done, the end point of this process is the collapse of BMC, assuming that government will not continue (as it should not) to indefinitely subsidise rising BMC losses. The speed and intensity of the downward spiral will partially depend upon price trends in the EU and exchange rate developments; however, the decline of real EU beef prices and/or the intensification of competition/weakening of Botswana's privileged status, both of which are likely under the CAP reforms tabled by the EU, will worsen BMC's problems. Pressures would be eased by a depreciation or devaluation of the pula vis a vis the pound and the euro, but this would not change the fundamental problems facing the BMC, only postpone the day of reckoning.
 - Botswana cattle farmers are currently getting a poor deal from the marketing system. They only have access to two markets - BMC and local butcheries - and cannot directly access more profitable export markets, such as South Africa where both cattle and beef fetch higher prices than in Botswana. The combination

²⁰ Price differentials vary across grades, ranging from 16% higher in Namibia for the highest grades and 64% higher for the lowest grades (excluding cattle detained, condemned or for canning). Source: BMC and Meat Board of Namibia (www.nammic.com.na). Namibia also has a concessionary quota for exports to the EU. Namibian beef is marketed in Europe by Allied Meat Importers, a subsidiary of BMC.

of BMC inefficiencies, overcapacity and the bans on export of live cattle and beef (other than by BMC) are collectively costing the cattle industry considerable amounts. While the country benefits from the high beef export prices currently realised in the EU, these revenues are dissipated in the current production and marketing system. The reasons for this wastage include the maintenance of unused excess capacity, and inefficiencies associated with BMC's status as a publicly-owned monopoly. Presumably for the same reason, BMC has also failed to respond to supply shortages in a rational economic manner, by raising its purchase prices.

- 2.24. **Protection from competition is counter-productive and contributes to BMC's inefficiency.** While the current set-up, which dates back to 1965, originated from a desire to develop what was historically Botswana's main export industry, and indeed the main economic activity in the country, it is clear that it is now counter-productive. It is widely recognised that efficiency in any industry or economy is promoted by (i) allowing competition through the operation of market forces, and (ii) having productive enterprises run by private entities and not by governments. Operating the beef export industry as a state-owned monopoly (and monopsony) may perhaps have been appropriate in the circumstances of 1965, but forty years later the expected problems of inefficiency in the industry have clearly emerged.
- 2.25. **The industry is facing a major crisis.** The implications of a continuation of the current set-up are clear. With sub-economic prices being paid for cattle and the viability of cattle production declining, rational cattle farmers will run down their herds and invest elsewhere. Therefore, not only will BMC collapse, so will much of the cattle industry, with negative implications for the rural economy, incomes and employment, exports, and efforts to diversify the economy. The only winners from the current situation are domestic consumers of beef, for whom prices in the local market are being held down, ironically, by the low prices paid to farmers by the BMC and the prohibition of competition for local butcheries from live cattle exports.
- 2.26. **Problems recognised by World Bank Export 2005 Diversification Study.** This situation has been recognised by other assessments. The beef sector study carried out for the BIDPA/World Bank Botswana Export Diversification study concluded that the beef export sector was "facing serious problems", that its future is "very bleak" and that "on present trends the export of beef from Botswana to non-regional markets looks set to become uncompetitive within a few years" (p.28).
- 2.27. **Supply shortages a result of the oxen production system.** The cattle and beef sector problems are not entirely the result or fault of BMC. Declining market prices, especially in the EU, are out of the BMC's control. Low capacity utilisation and high operating costs reflects excess capacity resulting from the unnecessary Francistown abattoir, for which government shares responsibility. Low capacity utilisation also reflects major problems on the supply side. As the above study noted, there is general agreement that "that the fundamental problem facing the sector is that the cattle off-take rate is too low" (p.31). There are many reasons for this, including, poor herd management practices in the traditional sector and free access to communal land, but it is likely that low prices are also to blame, as they reduce the incentives to invest in improved management and higher offtake. However, the overall offtake rate is consistent with an oxen production system, and countries in the region that achieve higher offtake rates (such as Namibia and South Africa) have done so through the adoption of weaner production systems.
- 2.28. **Drastic reforms are needed.** While it is beyond the scope of this paper to propose comprehensive solutions to the problems facing the cattle industry – other studies

currently under way are addressing these issues²¹ - certain essential components of any reform package are apparent:

- (i) on the farming side, higher prices are necessary to restore the viability of cattle farming in Botswana, and to generate the supply of cattle necessary to enable BMC to operate closer to full capacity;
- (ii) with respect to BMC, improvements in efficiency are required to enable a reduction in BMC's unit costs;
- (iii) the protection from competition (both from live cattle exports and other beef exporters) that BMC has enjoyed throughout its existence has led to BMC becoming an inefficient producer, and the removal of such protection is essential to expose BMC to market forces, enhance competition in the cattle/beef industry, and thereby improve efficiency;
- (iv) the removal of protection and raising of efficiency at BMC would enable prices paid to producers would move towards export parity prices, thus enhancing the viability of cattle rearing; and
- (v) in exposing BMC to competition, it will be necessary to restructure BMC, to cut costs and improve efficiency. Components of such restructuring should include (a) taking it out of state ownership and (b) closing down excess capacity. The former would be consistent with the Government's broader privatisation strategy, while the latter could most easily be achieved by closing down (or mothballing) the Francistown abattoir, as Lobatse can easily handle the entire BMC throughput, even if doubled from current levels.

3. HOW TRADE LIBERALISATION CAN HELP

3.1. As noted above, an industry operating in a liberalised trading environment, facing competition in domestic and export markets, would be expected to be more competitive and efficient than one operating in a protected environment. In the remainder of this paper, we trace how one particular element of trade liberalisation, permitting the export of live cattle, could contribute to enhancing the viability of the industry and bringing about a restructuring that would ensure the future of both export cattle rearing and the BMC²².

(a) *The Potential for Live Cattle Exports to South Africa.*

3.2. **South Africa dependent upon imports of beef and cattle.** The South African beef industry operates predominantly on the basis of a weaner production system and feedlots, which provide most of the slaughter cattle to abattoirs. However, the cattle farming sector is unable to meet the country's demand for beef, hence the deficit has to be met by imports of beef and/or live cattle. Imports of weaner calves from Namibia meet part of this deficit, but South African feedlots still have a shortfall reported at around 200 000 weaner calves a year, relative to their annual capacity of 1.5 million. Hence there is a demand for live weaner imports from Botswana²³.

²¹ Strategic Review of BMC being carried out by International Development Ireland (IDI) and the Government of Botswana Livestock Sector Study.

²² Full trade liberalisation would also open up the potential for exports of beef and processed meat products, and for imports of beef. These aspects will not be discussed in any detail in this paper, but would also be beneficial. For instance, allowing the importation of the particular cuts of beef that are preferred by the local market (forequarter) would release more cattle for slaughter by the BMC and sale to export markets, where different cuts are preferred.

²³ Report of BCPA/Ministry of Agriculture Task Force Fact Finding Mission on the Potential for Live Weaner Exports to the RSA Feedlot Market (May 2005).

- 3.3. **SA feedlot buyers have a preference for lightweight cattle such as those produced on Botswana's communal rangelands.** Feedlot operators have a preference for lightweight cattle (180-240kg) that offer the maximum potential weight gain, and hence the best potential return. As a result, a premium price is paid for lightweight cattle of the type that are raised on communal rangeland in Botswana. Furthermore there is only a very limited market for these cattle at present in Botswana, as BMC only buys cattle over 240kg, and there is very limited purchasing by feedlots in Botswana.
- 3.4. **Weaner auction system proposed, similar to the system operating successfully in Namibia, resulting in exports that would meet South Africa's cattle shortfall, along with higher prices for Botswana farmers.** To meet this shortfall, the Botswana cattle Producers Association (BCPA) has made a proposal to allow the export of live weaners and heifers to South Africa. The BCPA's intention is that this would take place via regular cattle auctions, at which the main bidders would be South African feedlot operators, who would buy weaners and heifers for fattening and eventual sale to South African abattoirs.
- 3.5. The proposal essentially replicates the system that operates in Namibia, which also has export abattoirs producing beef for sale to the EU (under the same EU-ACP Beef Protocol as Botswana), but additionally operates an auction system whereby weaners are sold to SA buyers. Namibia sells approximately 140 000 weaners annually to SA, a substantial proportion of which are provided by farmers operating on communal lands. As at early April 2005, Namibian live cattle auction prices ranged from P5.30 – P6.40 per kg.
- (b) *Short-term Impacts of Weaner Exports*
- 3.6. **Higher prices for cattle exports would benefit farmers, improve the viability of cattle farming, and provide an incentive for a switch to weaner production.** The most dramatic and immediate benefits of live weaner exports would be felt by cattle farmers, both commercial and traditional. An immediate market would be created for weaners and heifers, for which farmers would receive a price in the range of approximately P5 - P6 per kg live weight for cattle in the 180kg – 240kg range. BMC does not purchase such cattle at present, but this price represents a premium of 100% - 150% over the BMC live weight price for cattle in the 240kg – 300kg range. So the impact on farmers would be twofold. First, a new market would be created for weaners and heifers, yielding immediate cash flow for farmers whose margins have recently been under pressure. Second, the value of these cattle would rise sharply, increasing the viability of cattle farming. A third impact would be, in the short-term, to provide farmers with an incentive to reduce cattle numbers on the range, and thus reduce the environmental impact of excessive cattle numbers at a time of drought²⁴.
- 3.7. This substantial change in the economics of cattle rearing would be expected to have further medium and long term impacts that would include a significant supply response by producers; this will be discussed further below. However, the other short-term impact that needs to be considered is that which will be felt by BMC, and this will work through various channels.
- 3.8. **Cattle exports should not affect supplies to BMC in the short term.** In the very short term, the sale of weaners to SA would have no impact on cattle supplies to BMC, as these cattle are not purchased by BMC. The same numbers of older cattle (cows and oxen) will be available for sale to BMC (and other slaughter purchasers), and hence in the short term BMC should be able to maintain throughput at current levels. The

²⁴ Indeed, in view of the current drought, farmers are being urged by the Ministry of Agriculture to reduce numbers by selling weaners and heifers, but this advice ignores the fact that the main market for such animals is selling to other farmers, who will simply graze them elsewhere.

impact of increased offtake of weaners would only be felt by BMC after 1-2 years, as the weaners that would have been exported would no longer be available as mature animals for sale to BMC for slaughter. However, the combination of an appropriate price response from BMC and the likely supply response from cattle farmers should be sufficient to ensure that BMC continues to receive sufficient cattle.

- 3.9. **BMC will need to compete and pay higher prices to secure supplies.** The removal of the ban on live cattle exports will change the way in which market forces determine cattle prices. At present, live cattle prices in Botswana are largely determined by BMC as the monopoly (monopsony) purchaser of cattle for export beef production, with beef producers for the local market competing with the BMC price; however, as noted above, BMC prices are artificially low (relative to regional market prices) due to BMC's inefficient structure and operation, and its protection from international competition. However, competition from export sales will eventually force BMC to raise its prices in order to secure continued supplies of slaughter cattle. This is not because BMC is competing directly with weaner exports to SA feedlots; it is not. However, as farmers focus increasingly on selling weaners (due to the attractive export prices), BMC supplies will come to depend on the emergence of Botswana feedlots to produce slaughter cattle, and as Botswana feedlots will have to compete with the SA market to purchase their weaner inputs, higher BMC prices for slaughter cattle will be necessary to generate sufficient supplies. Therefore, the advent of export competition will tend to raise producer prices in Botswana, and this price-raising effect will require both BMC and other slaughter purchasers to pay higher prices to secure supplies of slaughter cattle. As a result, the domestic price of beef will tend towards South African levels. The movement of Botswana beef and cattle prices towards regionally competitive levels will be strengthened if BMC's beef export monopoly is removed along with the ban on live cattle exports.
- 3.10. **Financial pressures caused by the need to compete will force the necessary restructuring on BMC.** Having to pay higher prices to maintain throughput may temporarily worsen BMC's financial problems. However, this will simply hasten the necessary restructuring and cost cutting at BMC. Such reform and restructuring is required for BMC's survival regardless of the introduction of live weaner exports. In the medium to long term, the impact of live weaner exports on BMC is likely to be much more favourable, as farmers respond and farming practices change. This medium term response is outlined below.
- (c) *Medium-long term supply response*
- 3.11. **Permitting live cattle exports will also encourage the restructuring of the cattle sector towards a more efficient weaner production system.** While part of the motivation for introducing auctions and weaner exports is to achieve an immediate improvement in the prices paid to cattle farmers, a longer term motivation is to encourage transformation in the cattle sector. More specifically, the intention is to encourage farmers to move from the existing oxen/range grazing production system to a weaner/feedlot production system (see para 2.11 above). The latter type of production system characterises cattle rearing in more advanced economies, and is generally associated with more productive and efficient cattle rearing practices.
- 3.12. The process of transformation in Botswana cattle rearing can be envisaged as follows:
- the option of weaner exports, and hence the establishment of a market for weaners at a competitive (export-parity) price, encourages farmers to sell their animals as weaners (at 7 - 9 months) rather than keep them on the range to be sold as oxen (at the age of 2-3 years);
 - assuming that BMC purchase prices are also at competitive (export parity) levels, the establishment of Botswana feedlots would become viable, thus providing a local market for weaners for eventual sale as slaughter cattle to BMC; Botswana feedlots would provide competition for SA buyers at weaner auctions;

- under such a system, (almost) all male calves would be sold to feedlots, along with a substantial proportion of female calves (the remainder would be kept as replacement heifers and eventual breeding cows);
 - as the farming system evolves from an oxen production system to a weaner production system, the bulk of existing stocks of tollies and oxen would be sold for slaughter (although some would be kept for “liquidity” purposes)²⁵;
 - the structure of cattle herds would evolve towards one comprising mainly breeding cows, replacement heifers, and calves, along with a small proportion of bulls, plus cattle held on feedlots;
 - relative to the present herd composition, a herd oriented towards weaner production would have higher proportions of breeding cows and calves;
 - also relative to the present set-up, productivity would be higher (as a larger proportion of the herd would comprise breeding cows), offtake would be higher (ditto, plus the fact that calves would be sold at an age of less than one year rather than held to the age of 2-3 years);
 - the environmental burden would be reduced (as a larger proportion of the herd would comprise calves, which are mainly milk-fed rather than grass-fed);
 - the reduced environmental burden would permit an expansion of the national herd within existing environmental constraints;
 - the focus on weaner production would provide an incentive for improved calving rates;
 - minimising the time spent on the range (because most cattle are sold as weaners to feedlots) would reduce losses caused by disease, predators and theft, thus improving productivity further.
- 3.13. **A weaner production system would be more productive and efficient, dealing with the long-standing problem of low offtake and inadequate cattle supplies for both the domestic market and exports. Although some cattle would be exported, the long-term result would be an increase in cattle available for slaughter by BMC.** The impact on the Botswana cattle sector could therefore be substantial. Among the benefits would be higher productivity and improved offtake/supplies, thereby addressing one of the long-standing problems of the Botswana cattle sector, that of low offtake and insufficient supplies.
- 3.14. Should the anticipated supply response be forthcoming, the impact on the BMC in the medium to long-term would be positive, as significantly more cattle would become available, *even if large numbers of weaners are exported to SA* (this effect is shown in more detail in the example below). Furthermore, although it would take several years for the incentives to work through the system and transform it as indicated above, the adjustment process would release additional oxen and heifers from existing herds as a “one-off”; this would provide a buffer for BMC and mitigate the impact of reduced supplies resulting from the sale of weaners for export²⁶.
- 3.15. **The effect of a switch to a weaner system on cattle supplies could be dramatic.** The potential impact of the change in the production system is illustrated in the table below. Assuming relatively modest improvements in productivity rates (improved

²⁵ Having a few oxen enables farmers to sell cattle and raise cash immediately to meet unforeseen needs; in a weaner production system, the timing of weaner and cow sales is much less flexible.

²⁶ According to the 2002 Annual Agricultural Survey Report, there were approximately half a million tollies and oxen in the national herd of 2.5 million. The majority of these cattle would not be needed in a herd oriented towards weaner production, and hence would be available for slaughter.

calving and offtake, reduced mortality), and a full switch to weaner production, annual offtake is projected to more than double from 270 000 cattle to 556 000, without any increase in the size of the national herd. Even with weaner exports of 150 000 (similar to Namibia), and local non-BMC slaughter of 150 000, this leaves 250 000 head for BMC – nearly double current BMC throughput, and taking the Lobatse abattoir to full capacity. In the second future scenario, where the national herd expands by approximately 20% to 3 million, total offtake rises by around 150% to 667 000. Even with substantial weaner exports to SA, this leaves sufficient cattle for BMC to operate at full capacity, plus local consumption, plus cattle for other (non-BMC) beef exporters²⁷. While such numbers represent an extreme case of a full switch to weaner production, the main point is to illustrate how much more productive the weaner production system can be. Even in the more likely case of a partial switch, the increase in cattle supplies should be dramatic.

3.16. Therefore, if the opening up of the Botswana market to weaner exports induces the

Oxen and Weaner Production Systems: Cattle offtake scenarios

	Existing (Oxen prod. System)	Future I (Weaner prod. System)	Future II (Expanded weaner prod. System)
<i>Productivity rates</i>			
Calving	53%	63%	63%
Mortality	12%	9%	9%
Offtake	11%	22%	22%
Herd size	2,500,000	2,500,000	3,000,000
LSU equivalent [1]	1,909,250	1,650,000	1,980,000
Offtake	270,000	556,250	667,500
o/w cull cows		125,000	150,000
weaners		431,250	517,500

Note: [1] LSU = livestock unit (450kg)

Source: own projections (full details available on request)

anticipated transformation of the cattle sector, the (somewhat counterintuitive) result would be increase the supply of cattle to BMC. *Rather than undermining BMC, weaner exports could contribute to its viability and survival.*

- 3.17. **Positive impact on GDP.** A move to weaner production would help to stem the decline in the contribution of agriculture to GDP. The offtake rate is one of the main determinants of the cattle sector's contribution to GDP, and an increase in offtake would boost the growth rate of the agricultural sector. An increase in BMC throughput would contribute to manufacturing sector growth. Both developments would contribute to economic diversification.
- 3.18. **Government acknowledges, in NDP 9, that getting prices right is important; policy is that prices should be at competitive, export parity levels to encourage appropriate production and investment decisions. An increase in cattle and beef prices would be consistent with this objective; removing the BMC's monopoly and allowing exports of cattle (and beef) would provide an appropriate competitive benchmark for BMC.** There are a number of prerequisites for ensuring that the desired

²⁷ Although this scenario envisages a 20% increase in the size of the national herd in terms of numbers of cattle, the effective size of the herd in terms of mature livestock units (LSUs) is unchanged from the present, at just under 2 million, because of the replacement of oxen and tollies by calves in the composition of the herd.

transformation takes place. First, the role of prices is central. BMC has to raise slaughter cattle prices to realistic, export parity levels, to make feedlotting viable in Botswana and to ensure its own future through securing adequate supplies of cattle. NDP 9 acknowledges that “prices of agricultural commodities strongly influence the performance of the sector and the well-being of both producers and consumers”. Inappropriate pricing is central to both the malaise at BMC and the depressed state of the cattle sector. NDP 9 also states that Government policy is that “export parity prices will be used for export crops . . . such a pricing system will ensure that . . . producers are guided in their production decisions by competitive domestic and international prices”²⁸.

- 3.19. Although BMC in principle pays export-related prices at present, the fact that BMC’s own costs are too high means that the desired link with export-parity prices has been lost, and producers are not being guided in their production decisions by competitive prices. Such a link can only be restored by introducing competition for BMC from other export channels – preferably both live cattle exports and other beef exporters – and hence the removal of the BMC’s export monopoly is the second prerequisite for achieving efficiency in the beef/cattle sector. This should be accompanied by the establishment of a transparent and flexible price determination system for cattle, such as through regular auctions, with prices for different types and grades of cattle regularly published in a range of different media. BMC and other major buyers would then have to compete for available cattle supplies and prices would more accurately reflect supply and demand, thus providing a better guide for production and consumption decisions.
- 3.20. **Protection of BMC is inconsistent with the principles of SACU membership.** The Southern African Customs Union (SACU) Agreement enshrines the principles of free trade within the SACU area; trade restrictions may only be imposed for a limited range of reasons, and should be time limited. Imposing the permanent bans that have been used to protect BMC are certainly inconsistent with the spirit of the SACU agreement, if not the letter.
- 3.21. **There are good prospects of a positive supply response from both traditional and commercial farmers to the proposed changes.** The transformation of the cattle sector from oxen production to weaner production, which is crucial to ensure a continued supply of cattle to BMC alongside live weaner export to SA, depends of course on the response of cattle farmers. While this is to a certain extent an unknown quantity, there is good reason to believe that the necessary response will be forthcoming. First, all that is being projected is a rational economic response to the changed price and market environment that will result from allowing live weaner exports, and farmers, like other economic agents, should be trusted to respond in line with their best interests, if they are allowed to. It would, however, be necessary to reorient Ministry of Agriculture extension staff to the new production system, which requires more intensive oversight than an oxen production system.
- 3.22. **The Namibian experience provides an encouraging precedent.** The experience of Namibia is instructive. Namibia has a slightly smaller national herd than Botswana, around 2 million cattle, but has an offtake of over 400 000, or over 20%. And as in Botswana, most cattle are kept on communal land²⁹. Both commercial and traditional cattle farmers have responded positively to similar price incentives derived from the existence of a weaner auction system, resulting in much higher productivity and efficiency levels than in Botswana, and the continued existence of beef exports to the

²⁸ Both quotations are from p.190.

²⁹ Although the proportions of cattle on communal and commercial land in Namibia, at 60:40, are somewhat different to Botswana (85:15).

EU, alongside weaner calf exports to South Africa. Interestingly, Namibia operates on an entirely market-based system, with prices determined at auction and varying from month to month, depending on supply and demand. It is also notable that Namibian cattle, with an average carcass CDM of 240kg, are significantly heavier than Botswana cattle, which have an average carcass CDM around 200kg. The higher carcass weight, which is a characteristic of grain-fed feedlot cattle being supplied to abattoirs rather than grass-fed cattle, makes an important contribution to the viability of the industry. While the adjustment in Botswana will no doubt take some time to work through the sector, there is no reason to believe that Botswana farmers would not respond in the same way as their Namibian counterparts.

4. CONCLUSIONS AND RECOMMENDATIONS

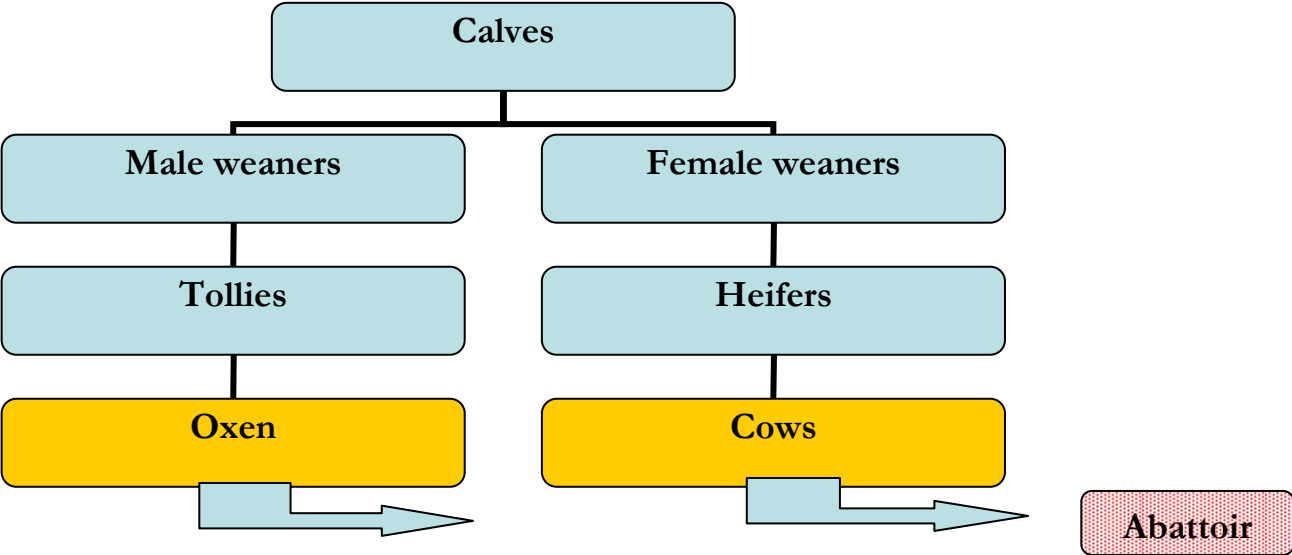
- 4.1. The Botswana cattle and beef sector is currently depressed and characterised by declining throughput and rising losses at the BMC, declining viability of cattle farming, and low offtake from the national herd contributing to supply problems. The downward spiral, if continued unchecked, will eventually lead to the collapse of BMC, a reduction in the size of the national herd and a smaller cattle industry focused mainly on supplying the domestic market, with negative implications for the rural economy and farming incomes.
- 4.2. Part of the problem is the low prices paid by BMC, which are discouraging sales to BMC, depressing local market prices, and undermining the viability of the cattle sector. The reason, in turn, for BMC's low prices is its monopoly position and associated inefficiencies.
- 4.3. Drastic changes are required if the cattle/beef sector is to be revived in order to generate significant export earnings and provide a vibrant economic base for the rural areas. The fundamental change required is for offtake and supply to increase, which in turn, requires the appropriate price incentives for farmers. This can be achieved by changing the focus of the cattle production system from an oxen production system to a weaner production system, which entails taking cattle off of the range at a much younger age and fattening in feedlots, thus increasing productivity, offtake and supply, and reducing the environmental impact of cattle rearing. A successful example of a weaner production system is that followed by both commercial and communal farmers in Namibia, in conditions very similar to those in Botswana
- 4.4. A prerequisite for a weaner production system is the existence of feedlot operators as an intermediary stage between the farmers and the abattoir. Viable feedlotting depends on a favourable relationship between farm gate prices, slaughter purchase prices and feed prices, and this does not exist in Botswana at present. Hence there is no significant weaner market for Botswana farmers.
- 4.5. Lifting the existing ban on live cattle exports would allow Botswana farmers to sell their weaner calves to feedlot operators in South Africa, thus enabling farmers to realise the much higher prices paid in South Africa, improve cattle farming viability, and stimulate a move towards weaner production.
- 4.6. Beyond these immediate benefits, permitting live weaner exports would in due course benefit the BMC, contrary to concerns raised in some quarters that it would deprive BMC of cattle. Because a weaner production system has much higher offtake rates and hence supply potential, it would eventually lead to more cattle being supplied to BMC even if significant numbers of weaners are exported to South Africa. It would also entail a move towards free trade and the efficient operation of the price mechanism in the cattle/beef sector, which is necessary for an efficient industry to emerge. Such a move would also be in line with the government's agriculture sector policy as expressed in NDP 9 as well its privatisation and competition policies and Botswana's membership of the Southern African Customs Union.

4.7. Removing BMC's protection would force BMC to pay competitive, regional export-parity prices to farmers. In the short-run, however, this would cause further financial stress for BMC, which is already making losses. But for BMC to survive, it has to operate at international (or at least regional) levels of efficiency. Allowing competition, besides benefiting farmers, would force the necessary restructuring on BMC. This is likely to include major cost-cutting and restructuring measures such as selling off non-core assets, reducing excess capacity through the closure of the Francistown abattoir, a wage and hiring freeze, and cutting back on other expenditure. The overall combination of promoting free trade and competition in the cattle and beef sector, drastic restructuring of the BMC, and a switch to a more efficient weaner production system should all be important components of a coherent plan for the long-term development of Botswana's beef and cattle sector.

4.8. **Summary of Recommendations**

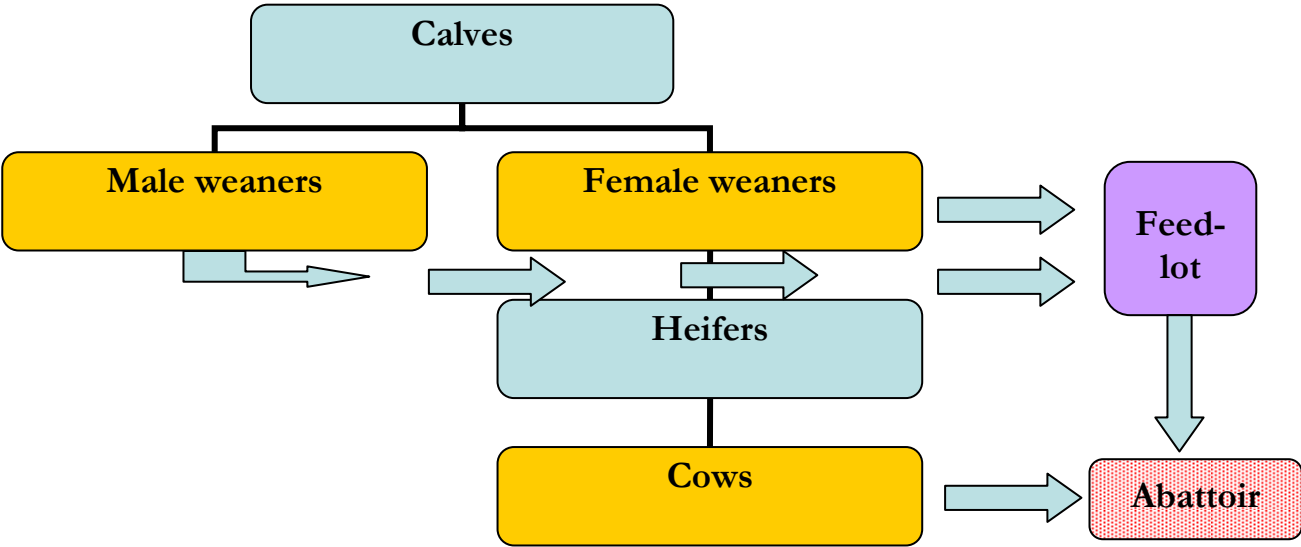
- (i) immediately lift the ban on live cattle exports (permitted through Ministerial decision under the BMC Act); **[MoA]**
- (ii) initiate a revision of the BMC Act to remove the prohibition of non-BMC export slaughterhouses and beef exports; **[MoA]**
- (iii) lift the ban on beef imports; **[MoA/MTI?]**
- (iv) undertake a downsizing of BMC to align capacity with throughput; most likely, this would be through the closure of the Francistown abattoir; **[BMC/MoA]**
- (v) undertake a drastic cost-cutting exercise at BMC to align costs to competitive levels, and sell off non-core assets; **[BMC]**
- (vi) develop Ministry of Agriculture extension services to support the adoption of weaner production systems by communal farmers; **[MoA]**
- (vii) introduce auctions for sales of weaner calves and heifers to feedlot operators (from Botswana and South Africa); **[BCPA]**
- (viii) consider introduction of national auction system as primary method of cattle sales and price determination, along with widespread and regular publication of cattle and beef prices **[BCPA, MoA]**.

Oxen Production System



Low productivity – high environmental impact

Weaner production System



High productivity – low environmental impact