

# GOVERNANCE AND UPGRADING OPPORTUNITIES IN BEEF INDUSTRY IN BOTSWANA: A VALUE CHAIN APPROACH

M.K.Sukumaran Nair

University of Botswana

Email: nairm@mopipi.ub.bw

Globally distributed nature of manufacturing processes is increasingly becoming the order of the day. Even food industry is no exception to it. Global Value Chain analysis is a powerful tool to understand the dynamics and implications of such processes. The beef industry in Botswana shows how global integration through stringent governance of the value chain by the leading actor has offered it both stick and carrot. The stick is the quasi-hierarchical governance structure and the strict standards prescribed and enforced by constant monitoring by the European Union. A major component of the standards is the sanitary and phytosanitary requirements. This has made the industry subject to marginalization and non-tariff technical barriers to trade. The carrot is that the participation in the chain has offered the industry a number of upgrading opportunities which could result in heightened competitiveness and better distribution of gains.

**Key words:** beef, Botswana, governance, SPS requirements, upgrading, global value chain analysis

## 1. INTRODUCTION.

The production process in most of the modern and some of the traditional industries is globally distributed. The global distribution of the work process is increasingly associated with globalization itself. The key feature of the current phase of globalisation according to Gareffi (1994) is the functional integration and coordination of internationally dispersed activities. Globally dispersed trade based production networks are the links between transnational corporations and the rise of a specific group of economic agents such as branded merchandisers and large retailers (Daviron and Gibbon, 2002). While globalization throws up opportunities of upgrading the production process in the developing countries, it also leads to marginalisation and exclusion. This happens because upgrading opportunities of local producers vary with the type of chain governance (Schmitz, 2004). Global Commodity Chain (GCC) is a relatively new approach that is quite powerful to capture the impact of globally distributed work on the local economy right from the preconditions to production to final consumption.

The beef industry in Botswana offers an interesting case of a local system that has got increasingly integrated into a global market characterised by complexity and competitiveness. Increasing pressures of competitiveness and external pressures of standard compliance have pushed the industry into a corner fraught with considerable strain. The present study proposes to analyse these issues by foregrounding the organizational, institutional and power-laden linkages among the chief actors in the beef industry in Botswana.

Beef export was, till the discovery of diamond deposits in 1968, the main source of revenue for Botswana, a land locked Southern African country. Even today beef is the second largest export earner and a main source of livelihood for the rural people of Botswana. Beef accounts for 80 percent of the agricultural GDP in the country. Having a cattle post is still a symbol of prestige and aristocratic status of even the urban elites in the country. The major export market for Botswana beef is the EU and South Africa followed by the Reunion. As Botswana has a significant price preference in the EU market subsequent to the Lome Convention and Cotonou agreement, the EU market still remains its major export destination. Even as early as 1960, much before the independence of the country, Bechuanaland (the old name for Botswana) was allotted some quota for beef in U.K. It marked a transition in the status of beef industry from a 'reserve industry' to a 'growth industry' (Hubbard, 1986). In spite of the overwhelming importance of cattle for the economy and society, the beef industry is in a deep crisis because of the internal and external threats confronting the industry.

The rest of the paper is organized as follows. Section 2 examines the Global Value Chain (GVC) approach and how it provides an analytical framework for understanding the dynamics of the beef industry. Section 3 discusses the governance pattern in the chain the chain and tries to identify the key actors and their role. Compliance of Sanitary and Phytosanitary (SPS) measures and its consequences on the domestic segment of the chain is discussed in Section 4. Section 5 traces the major weaknesses in the chain and explores possibilities of upgrading. The last

verification systems are put in place through certification, labeling etc. Therefore agents external to the value chain also may sometimes impose new requirements. The role that external institutional institutions of governance play in shaping the dynamic driving the establishment, management and future trajectory of specific value chains in particular country has not been sufficiently researched (Barnes and Morris, 2004). In some cases, compliance with the standards becomes so expensive that agents external to the chain step in to assist developing country firms. In the case of beef industry in Botswana, some of the costly SPS requirements imposed by the EU are met by the government as the supplier firm does not have adequate financial resources for compliance. Often the standard setting becomes so stringent that developing country firms are required to specify the type of product to be supplied with all minute details including the safety standards (Humphrey and Schmitz, 2004).

The type of the value chain and the precise structure of governance offer opportunities for developing countries to upgrade their specific segments of the chain and thus enhance the income gains. In short, the value chain analysis helps to identify what is facilitating or inhibiting growth and the distributions of the social and economic benefits in specific sectors within developing countries engaging in global markets (Kaplinsky, 2000). The upgrading opportunities lead to the making of better products, development of more efficient production methods and moving into more skilled activities. Thus the local sources of competitiveness get strengthened in the developing countries. In literature four types of upgrading opportunities are identified (Schmitz, 2004).

1. Process upgrading: Here inputs are transformed into output more efficiently by reorganizing the production system or introducing superior technology.
2. Product upgrading involves moving into more sophisticated product lines.
3. Functional upgrading helps the acquisition of new functions in the chain to increase the overall skill content of activities.
4. Inter-temporal upgrading envisages the using of the knowledge acquired in particular chain functions to move into different sectors.

Thus the nature and type of governance in a value chain offers a number of opportunities to the participating developing countries as well as the developed countries. Supplier failure is a possible occurrence in the chain particularly in the context of increasing non-price competition through high quality of the products with high safety standards, timely and reliable delivery of the product etc. Close monitoring and coordination ward off the fears of supplier failure. When agents external to the chain impose new requirements on the lead firms, governance helps to ensure compliance. In the context of an increasing world trend towards differentiation and risk of supplier failure due to quality assurance standards and speed of delivery, coordination through the market becomes unreliable and the need to resort to non market coordination necessitates governance structures to be put in place.

Setting standards for products and processes in the chain promote compatibility between diverse actors within the chain, help organize their linkage, reduce transactions costs associated with governance and lower risks for actors in the chain (Nadvi and Waltring, 2004). Further harmonization of standards is agreed to facilitate international trade and reduce potential market failure (Nadvi and Waltring). The information provision associated with standards reduces costs and ensures efficient use of resources within the supply chain. Standards further promote better and more assured control of quality within international supply chain, improve market transparency of supplies and reduce transaction costs related to quality management (Nadvi and Waltring). Further more if standards are clearly prescribed, buyers need not develop their own monitoring and evaluation criteria which are often very expensive and cumbersome. Insistence on standards result in the emergence of quasi-hierarchical relations which according to Gareffi (1999) have great prospects for upgrading within production and subsequently into design, marketing and branding. The developing country producers that integrate in buyer driven value chains can expect rapid upgrading (Gareffi, 1999).

While appreciating the positive contributions of governance to the smooth functioning of the GCC, it is necessary to note the stringency of the conditions that are imposed on the developing country firms which in turn erode their autonomy considerably. Schmitz (2004) clearly recognizes this while saying that “participating in the global economy brings both opportunities and challenges”. The setting of standards and their enforcements are costly for the buyers. The control of the local firm pertains not only to product and process specifications, but even to the buyer’s perceived risk of loss from the supplier’s performance failures (Humphrey and Schmitz, 2004). A high degree of coordination (hierarchical or quasi-hierarchical) may result in more unequal distribution of income along the chain (Ponte and Gibbon, 2005). The governance structure is determined by the power of one party which in turn depends

EU. Even to share these facilities with other countries needs the prior approval of EU.

Despite the preferential treatment given to Botswana meat in the EU market, the country is not able to meet even half of the quota allotted to it because BMC is not getting enough animals to work even at 50 percent of its plant capacity. Hence it has been incurring loss since 1998-89. Studies show that its operational costs are much higher than that of the international best practice firms (IDI, 2005). BMC is not able to compete with local butcheries in procuring cattle. Moreover, due to the recent European Commission Agricultural Policy (CAP) Reforms (Agenda 2000 Reforms), beef prices in EU on an average experienced a 13 percent decline and a further 7 percent decline as a result of the mad cow and foot and mouth disease. The cost of shipping and transport of meat to EU from Botswana has risen from 11 percent to 17 percent in recent times.

The major reason for the decline of the beef industry in the country may be listed below: (Stevens and Kennan, 2005)

1. Declining prices for beef export either absolutely or relative to domestic prices;
2. Extra Botswana cost rising faster than revenue;
3. Intra Botswana cost rising faster than revenue;
4. Declining efficiency in BMC;
5. Inefficient farming practices;
6. Seasonal and quality variations in supply; and
7. Prohibitively high compliance cost of SPS measures.

Prices in BMC's export markets have not risen at least in foreign currency terms for a number of years, while the costs have increased substantially (Stevens and Kennan, 2005). Freight, storage and other selling expenses to net sales rose from 12.4 percent in 1985-86 to 16.3 percent in 2004. Similarly these expenses by themselves recorded an increase of 12 to 22 percent during 2001-2004 alone. Intra Botswana costs also rose up by leaps and bounds largely due to increased procurement prices of live animals by about 40 percent during 2005 and increasing SPS compliance costs. If one compares the costs with the international bench mark data one can find that the costs of production in BMC is unreasonably high. While the international bench mark data shows costs for staff, maintenance, utilities and logistics management together to be just 14.25 percent of the sales revenue, the figure for BMC is as high as 37.8 percent (IDI, 2005).

#### **4. Impact of SPS Measures.**

In chain governance, parameters are set by the advanced countries for developing countries to follow. Standards constitute an important parameter. A survey of 65 developing countries revealed that the most stringent impediment to exports to the EU has been SPS requirements and most interestingly many of the participants in the survey were countries subject to lower tariff rates under the Lome Convention (Henson and Loader, 2001). In the case of beef the SPS measures are important standards that are found to be strictly adhered to by the beef exporting countries. The EU's White paper on food safety has its social objective as "assuring that the EU has the highest standards on food safety" (Spriggs and Isaac, 2001). In value chains normally the standards are set and monitored by the lead firm; but in the case of the beef value chain the standards are imposed and monitored from outside the chain by an external agency, the European Union. EU has laid down very strict animal health rules

Botswana has been investing heavily in SPS compliance for the last many years. The full cost of it and more particularly the capital cost are not yet available in a consolidated form. The government has so far spent P 150 (US \$ 25) million to place bolus in each cow for the traceability purpose. A further expenditure of P 100 million (USD 16) is being spent every year to meet some of the other measures. In order to maintain hygienic condition, BMC has to employ a permanent veterinarian at its refrigeration store in London for “opening and closing” the refrigerators at a cost of 53,000 pounds every year. In addition, the EU has imposed certain other restrictions which have added to the production cost of BMC. For instance, the EU has forced to stop the production of bone meal and is now threatening to do the same with carcasses that are sold for the making of carcass meal. EU also carries out occasional inspection and auditing of the production process. The testing of meat samples as insisted by EU at regular interval also costs a great deal of money to Botswana. Thus in effect compliance of SPS standards has been an effective non-tariff barrier to Botswana. Whatever concession is given to Botswana beef as price premium in the EU market is more than offset by the unreasonable and unjustifiable SPS measures.

## 5. OPPORTUNITIES FOR UPGRADING.

Though the beef industry in Botswana is in a deep crisis due to external and internal pressures, our analysis shows that upgrading possibilities still exist, though there are practical difficulties and complexities of realizing even the most basic upgrading options (Gibbon, 2001). Weakness are evident at every segment of the chain right from cattle rearing and farm management, cattle procurements, meat processing at BMC, preserving the meat at cold storages and packaging and shipment.

The poor management of the ranches and cattle posts has reduced the quality and regularity of cattle supply. The major draw backs of the farm management practices are:

1. The traditional sector which supplies more than 90 percent of the throughput does not practice modern management methods and techniques.
2. The cattle feed clearly lacks sufficient nutrients which has a negative impact on the body weight of the animals and their fertility rates.

The inadequate availability of live animals, insufficient body weights of the available ones and the irregularity in their availability have been severe constraints on the capacity utilization of the abattoirs at a minimum efficient scale. The average Cold Dressed Mass

(CDM) of the animals in Botswana is just around 197 K.G., as against 245 K.G. for an animal in Namibia, a neighbouring country with more or less the same agro climatic conditions. Similarly during drought years, there is no alternate provision of drinking water in Botswana. According to some estimates, there is an annual loss of \$ 13 million due to death of animals on account of starvation and lack of market facilities (UN, 2006). Further, most of the cattle farmers are urban dwellers that do not take full care of their farms and only exercise remote control over them. All these indicate that a professional approach to cattle farming can not only raise the supply of animals, but also increase their CDM substantially. By adopting modern management practices, the supply of Botswana animals can be increased by 250 percent (Stevens and Kennan, 2005).

Studies (IDI, 2005) also demonstrate that the BMC suffers loss largely due to high operation costs compared to the best practice plants elsewhere. An organizational restructuring of BMC can yield significant results by reducing operation costs.

Currently the cost of transportation from production centers to the abattoirs and from the abettors to the cold storage in Cape Town is between 10 to 20 percent of the sales revenue. A more efficient logistics management can go a long way in reducing transport costs significantly.

The cold storages at Cape Town and London operate only at a capacity utilization level of 24 and 40 percent respectively. As these cold storages are to be dedicated to EU destinations, alternative usage is not permissible. Moreover, these cold storages incur an enormous labour cost by employing around 60 workers each. A rational

In the case of Botswana beef industry, the more expensive part of compliance is met by an agency outside the chain, viz, the Government of Botswana. As only part of the cost needs to be borne by BMC, upgrading efforts are not as cumbersome as it appears. Our study shows that despite the stringent nature of the SPS measures, there is immense potential for value addition at every segment of the chain. Of course, the task is complex and stupendous.

## REFERENCES:

- APHIS Veterinary Services, "Bovine Spongiform Encephalopathy: Factsheet", [http://www.aphis.usda.gov/lpa/pubs/fsheet\\_faqs\\_notice/fs\\_ahbse.pdf](http://www.aphis.usda.gov/lpa/pubs/fsheet_faqs_notice/fs_ahbse.pdf), 2002.
- Bames, Justin and Mike Morris, "The German Connection: Shifting Hegemony in the Political economy of the South African Automotive Industry", *Industrial and Corporate Change* (13:5), 2004, pp.789-814.
- Council Directive, "Laying down the Animal Health Rules Governing the Production, processing, Distribution and Introduction of Products of Animal Origin for Human Consumption", *Official Journal of the European Countries* (December 16), 2002.
- Daviron, Benoit and Peter Gibbon, "Global Commodity Chains and African Export agriculture", *Journal of Agrarian Change* (2:2), 2002, pp. 137-161
- Dolan, Catherine and John Humphrey, "Changing Governance Patterns in the Trade in Fresh Vegetables between Africa and the United Kingdom", *Environment and Planning*, (36: A), 2002, pp.491-509
- Gareffi, Gary, "The Organisation of Buyer-Driven Global Commodity Chains: How U.S. Retailers shape Overseas Production Networks", in *Commodity Chains and Global Capitalism*, Gereffi, Gary and Miguel Korzeniewicz (eds), Westport, Connecticut and London, Praeger, 1994.
- Gareffi, Gary, "International Trade and Industrial Upgrading in the Apparel Commodity Chain", *Journal of International Economics* (48:1), 1999, p.p.37-70
- Gibbon, Peter, "Upgrading Primary Production: A Global Commodity Chain Approach", *World Development* (29:2), 2001, pp.345-363
- Government of Botswana, "Department of Animal Health and Production Handbook", *Ministry of Agriculture*, 2005.
- Henson, Spencer and Rupert and Loader, "Barriers to Agricultural Exports and Developing Countries: The Role of Sanitary and Phytosanitary Requirements", *World Development* (29:1), 2001, pp. 85-102.
- Hobbs, J.E. and L.M. Young, "Vertical Linkages in Agri-Food Supply Chains in Canada and the United States", Strategic Policy Branch for Agriculture and Agri-food, Canada, referred to in Muradian, Roldan and Wim Pelupessy, 2005, opcit.
- Hopkins, Terrence K. and Immanuel Wallerstein (1986), 'Commodity Chains in the World-Economy Prior to 1800', *Review* (10:1), 1986, pp.157-70
- Hubbard, Michael, *Agricultural Exports and Economic Growth: A Study of the Botswana Beef Industry*, KPI Limited, London, 1986.
- Humphrey, John and Hubert Schmitz, "Governance in Global Value Chains", *IDS Bulletin* (32:3), 2001, pp.19-29.
- Humphrey, John and Hubert Schmitz, "Governance in Global Value Chains", in *Local Enterprises in the Global Economy: Issues of Governance and Upgrading*, H. Schmitz (ed), Cheltenham,UK., Northampton,MA,USA: Edward Elgar, 2004a, pp. 95-119.
- Humphrey, John and Hubert Schmitz, "Chain Governance and Upgrading: Taking Stock" in *Local Enterprises in the Global Economy: Issues of Governance and Upgrading*, H. Schmitz (ed), Cheltenham,UK., Northampton,MA,USA: Edward Elgar,2004b, pp. 349-383.
- International Development Ireland Limited, "Final Report for Provision of Restructuring Planning Assistance to Botswana Meat Commission", mimeo, Gaborone, July2005.
- Kaplinsky, R, "Globalisation and Unequalisation: What Can Be Learned from Value Chain Analysis", *Journal of Development Studies*, (17:2), 2000, pp.117-46.
- Kaplinsky, R. and M. Morris, "A Handbook for Value Chain Research", *IDS Research Report*, <http://www.ids.ac/global>, 2001
- Muradian, Roldan and Wim Pelupessy, "Governing the Coffee Chain: The Role of Voluntary Regulatory Systems", *World Development*, (33:12), 2005, pp.2029-44.
- Nadvi, Khalid and Frank Waltring, "Making Sense of Global Standards", in *Local Enterprises in the Global Economy: Issues of Governance and Upgrading*, H. Schmitz (ed), Cheltenham,UK., Northampton,MA,USA: Edward Elgar, 2004, pp. 53-94
- National Centre for Infectious Diseases, "Factsheet: New Variant Creutzfeldt-Jakob Disease", [http://www.cdc.gov/ncidod/diseases/cjd\\_fact\\_sheet.htm](http://www.cdc.gov/ncidod/diseases/cjd_fact_sheet.htm), 2004.
- Ponte, Steffano and Peter Gibbon, 'Quality Standards, Conventions and the Governance of Global Value Chains', *Economy and Society* (34:1), 2005, pp.1-31.
- Schmitz, Hubert, "Globalised Localities: Introduction", in *Local Enterprises in the Global Economy: Issues of Governance and*