Evaluation of Food Safety Measures of African Countries' Trading Partners on Conventional and Organic Beef Exports

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ABSTRACT

The average annual value of African beef exports was approximately 16 million dollars in the period 2000-2009. The annual African beef export outputs increased haphazardly leading to a low single digit average annual growth rate of 3.64% in the period. A major contributor to this was attributed to market access restrictions caused by stringent food safety measures imposed by the European Union trading partner and other African beef exports major trading partners. Descriptive statistics was utilized to analyze time series data of notifications by hazard categories of beef export consignments obtained from annual reports of the European Union rapid alert system for food and feed for the period 2005-2009. The result showed an average annual market access restriction of 154 beef export consignments in the EU export market in the given period. The following hazards were observed to have contributed about 70% to the market access restrictions: potential pathogenic microorganisms (49.47%), bad odours (5.72%), organoleptic changes (4.94%), veterinary residues (4.57%), food additives (2.15%), heavy metals (1.8%), microbiological organisms (1.76%), foreign bodies (1.58%), packaging (3.08%) and parasites (1.57%). In order to create sustainable growth of African beef exports, Government of African countries should promote export of competitive value added beef products should to export markets of major trading partners.

Key words: Export, output, African, Food, Safety, Beef

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INTRODUCTION

Sanitary and phytosanitary measures are technically defined as measures designed to protect human or animal from risks arising from additives, contaminants, toxins or disease causing organisms in food; protect human life from diseases carried by plants and animals; protect animal and plant life from pests, diseases or disease causing organisms; and protect an importing country from the entry, establishment or spread of pests and diseases. Sanitary and phytosanitary measures can take, and have assumed, such forms as requiring product to come from a disease-free area, pre-export or post-import inspection of products, specific treatment or processing of products for imports and exports, and setting of allowable maximum level of pesticide residues or permitted use of only certain additives in food according to United Nations Commission on Trade and Agricultural Development (UNCTAD, 1999).

Meeting the market requirements for agricultural export products has become more challenging in recent years. Global agricultural trade in general has been characterized by the increasing importance of standards. Satisfying the food safety requirements of importing countries has become more complex as both the range of items covered by mandatory standards and the stringency of standards are on the increase. At the same time, demonstrating compliance with standards has become more complicated because of strict international product standards, largely enforced through testing at borders (of exporting and importing countries), towards controls over the way that products are grown, harvested, processed and transported. At the same time, public, mandatory standards have increasingly been complemented by collective private standards such as Safe Quality Food (SQF). Also Industries in agricultural trade have to satisfy the requirements of demanding global buyers. These requirements may include customization of products through processing, packaging and guaranteed product safety. The importance of these requirements has increased. However, there are opportunities for product differentiation strategies in agricultural industries. In a statement in the World Bank report, these are parts of strategies to move "outside of the commodity box" (Lewin

et al., 2004) as a means of adding value to agricultural commodities and offsetting declines in prices. Typically, strategies for adding value to organic products involve certification or closer links with traders, processors or retailers. The process of adding value requires that the identity and distinctiveness of the product is established at the point of origin and maintained as it moves along the value chain (Lewin *et al.*, 2004).

The study evaluated the food safety measures of African countries major trading partners for conventional and organic beef exports. The main objective of this study was therefore to determine whether food safety measures imposed by major trading partners of African countries beef exports restricts market access and to determine the importance of certified organic beef export trade.

ANALYTICAL METHOD

Time series data for beef exports consignment restrictions by hazard categories in the EU export market from 2005 to 2009 was obtained from the Rapid Alert System for Food and Feed (RASFF) for the EU, as the EU is the major trading partner for African countries' exports. In this respect purposive sampling method was utilized for the study. The data obtained were analyzed utilizing descriptive statistics to determine the average annual number of consignment restrictions by total hazard categories in 2005 to 2009. The average annual number of consignment restrictions by each hazard category in the given period was analyzed to determine the shares of number of consignment restrictions by each hazard categories in the total number of consignment restrictions by total hazard categories annually and to determine the food safety measures hazard categories that were most restrictive for consignments of beef exports in the EU export market in the period. Utilizing descriptive analysis, the properties of certified organic beef products that enhances gaining of export market access and prevents export market access restrictions of consignments of organic beef exports by imposed food safety measures of African countries beef export trading partners were analyzed to determine the importance of certified organic beef exports.

RESULTS

In the period 2000-2009, the average annual trade value of African beef exports was 16.095 million USD. The average annual trade value of African beef exports growth rate was 3.64%. In Table1, the annual trade values increased haphazardly in the given period and the annual value of African Countries' Beef exports declined from 18.352 million USD in the year 2000 to 9.877 million USD in 2002. The value of the Beef exports rose in year 2002 to 22.962 million USD in 2004.

Table 1: Annual outputs for African beef exports to trading partners' countries 2000-2009 (1000 USD)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
Output	18.352	12.704	9.877	12.639	22.962	21.802	15.783	18.795	13.445	14.591	16.095

Source: FAOSTAT, 2011

Also in Table 1 the African countries beef exports value declined from 22.962 million USD in 2004 to 15.783 million USD in 2006. The value rose from 15.783 in 2006 to 18.795 million USD in 2007. The value also declined in 2007 from 18.795 million USD to 13.445 million USD and rose to 14.591 million USD in 2009. In Table 2, the trade value of the African Countries' Beef exports recorded a positive growth rate of 13.40% in the year 2000. In 2001 and 2002 it recorded negative growths (-30.78% and -22.25% respectively). In the year 2003, the trade value growth rate was 27.96% and the trade value growth remained positive till 2004. The trade value had negative growths of -5.05% in 2005 and -27.60% in 2006. The trade value had a positive growth of 19.08% in 2007 and a negative growth of -28.46% in 2008. The trade value recorded a positive growth of 8.52% in 2009. The trend analysis of the annual trade values of African countries' beef exports showed that the values had haphazard growth rates (increasing and decreasing patterns).A major contributor to the haphazard growth rates of the annual trade values of African beef exports has been attributed to sanitary and phytosanitary food safety measures imposed on African countries' beef exports by major trading partners. These measures are non-tariff measures which distort trade

(Hillman, 1997). These food safety measures distort the African countries' beef export trade to a major trading partners by causing market access restrictions of beef exports.

The result of the study showed that 10 hazard categories of food safety measures contributed an average of 76.64% to the annual beef export consignments restrictions from market access in the EU export market from 2005 to 2009. The major hazard categories are potential pathogenic micro-organisms (49.47%), bad odours (5.72%), organoleptic changes (4.94%), veterinary residues (4.57%), packaging (3.08%), food additives (2.15%), heavy metals (1.8%), microbiological organisms (1.76%), foreign bodies (1.58%) and parasites (1.57%) as showed in figure 2.

Table 2: Annual growth rates for African countries beef to trading partners 2000-2009

	%
Years	Growth rates
2000	13.40
2001	-30.78
2002	-22.25
2003	27.96
2004	81.68
2005	-5.05
2006	-27.61
2007	19.08
2008	-28.47
2009	8.52
Average	3.64

Source: Author's computation from FAOSTAT 2011

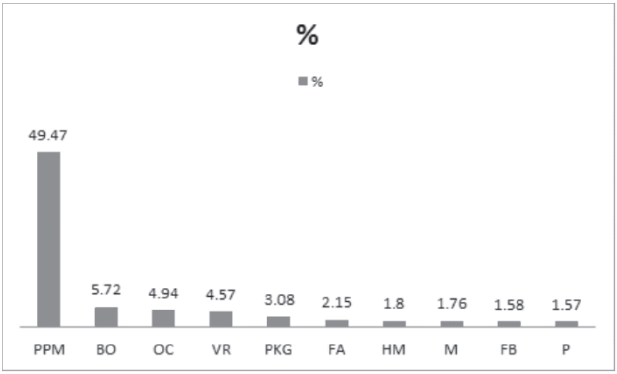

Figure 2: Average percentage of hazards restrictions in annual number of hazard restrictions for beef exports consignments in EU export markets (2005-2009).

Legend: PPM - Potential Pathogenic Micro-organisms; P – Parasites; BO – Bad Odour; OC - Organoleptic Changes; VR - Veterinary Residues; PKG – Packaging; FA - Food Additives; HM - Heavy Metals; M - Microbiological Organisms; FB - Foreign Bodies.

Source: Author's compilation from RASFF Annual Reports (2005 to 2009).

DISCUSSION

The results showed that the EU export market access major restrictive hazard category for beef export consignments between 2005 and 2009 was potential pathogenic organisms (49.47%). This major hazard category and perhaps other hazard categories, causing market access restrictions of consignments of beef exports, can be prevented by utilizing good management practices for production of beef exports. Certified organic beef exports are expected to be produced by utilizing strict good management practices so as to make the beef exports free from chemicals and other hazards to human and animal health. These qualities of certified organic beef exports is expected to enable compliance of certified beef exports to stringent food safety measures of African beef exports trading partners and to enhance market access of African beef exports in export markets of major

trading partners. These would lead to increasing annual foreign exchange income from beef export trade for African countries and would prevent annual loss of foreign exchange income by African countries beef export firms due to market access restrictions of African beef export consignments caused by non compliance of beef exports with stringent food safety measures of major trading partners.These would also lead to sustainable growth of domestic beef production and beef export industries in African countries and the creation of increasing job opportunities for unemployed African youths in the industries.

CONCLUSION

It can be concluded that sanitary and phytosanitary food safety measures imposed by major African beef export trading partners such as the EU trading partner on African countries beef exports causes market access restriction of consignments of beef exports due to non compliance of beef exports to imposed stringent food safety measures imposed by the major trading partners of African beef exports in their export markets. These predisposes African countries beef export firms to annual loss of foreign exchange income from export of conventional beef exports to export markets of major African beef exports trading partners, whereas export of consignments of certified organic beef exports to the EU export market and other export markets of trading partners would lead to increasing market access and sustainable increasing income from beef export trade for African countries. These would also lead to sustainable growth of African beef production and export firms and increasing opportunities for creation of jobs for unemployed youths in these firms.

RECOMMENDATION

The governments of African countries should implement and enforce policies that will promote the export of value added competitive beef exports which will gain easy market access to export markets.Innovative value added certified organic beef production and export to international export markets of African major trading partners should be promoted by

African governments.This would lead to sustainable growth of annual African beef export trade values and create international partnership opportunitiesfor beef export trade for African countries.

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