Commercialisation of food processing and preservation in Africa:
The need for outcome-based policy imperatives to impact job creation, regional and local economic growth and ensuring consumers’ safety

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Introduction

Africa remains the continent with greater arable land to feed its growing population and beyond, yet the continent remains the most impoverished in food security. The Sub-Saharan Africa (SSA) net food production per annum is within 230 million tonnes (Gustavsson et al. 2011: 5). Greater portions of this amount is lost due to various factors ranging, for example, ‘poor infrastructure, low levels of technology and low investment in the food production systems’, pest, inadequate policies, storage, climate and other factors (Andah 2000: 9; Gustavsson et al. 2011: 10). Whilst food wastage (most often caused by both retailers and consumers throwing perfectly edible foodstuffs into the trash, in industrialised countries) amounts to 222 million tonnes per annum. It was a common saying in West Africa some time ago that because one can easily fetch your daily meal ingredients from the house backyard, worry about processing food surplus for preservation was non-essential.

The paper uses some key terminologies: Agro-processing as defined by White (1999: 6) is ‘generally the post harvest processing of agricultural crops whereas food processing is defined as bakery or cooked food, soft drinks and beer brewing, roasting meat, processed fruit and vegetables, pickles, home made jellies and other food related products and services’. Food Security hinges on two main factors which are food availability and access to food. Food availability involves industrial production (equipment for crop production and crop processing), storage, transportation, packaging, distribution and trade. Access to food entails both transportation system by which food can reach the marketplace and the purchasing power to buy the food (Jaffee and Morton, 1995, quoted in Atkinson et al. 2000: 20). The paper adopts these definitions for this work which is based entirely on secondary sources and media review.

The improvement in food availability and access to food calls for innovations in the manner post-harvest staples, vegetables, fruits surplus and meat products can be processed and preserved and sold cheaper and safer for consumption by human and non-human (household and farm animals and birds including fish). The paper’s conceptual philosophy is based on review findings and issues raised in the paper, thus, technicalities and the policies required for improving food availability and access to food within a state, regions and between regions depends on political decisions and technical know-how generated by science institutions, and the involvement of food producers and the private business that translate favourable policy and technical outcomes into viable commercial venture.
The author reviewed the extent of commercial food processing and preservation across the continent particularly SADC. The paper found inadequacies in food security policies regarding the promotion of food processing and preservation which contributes to the high level loss and wastage of post-harvest products. The presentation will explore pointing some policy directions to induce expanded commercialisation of food processing and preservation in Africa. There are obvious externalities omissions that the author deliberately did not include comments in the paper such as the Lome Conventions among others in effort to localised and narrow the scope. The paper therefore begins with a review existing national and regional commercialization food processing and preservation investment and development beginning with a survey; it is followed by the challenges of the 21st Century food processing and preservation industry as key to African Food Security and job creation; Quality control and consumers’ safety policy and enforcement for export drive; and the way forward and conclusion for agri-business growth.

**Survey of existing national and regional commercial food processing and preservation investment and development**

a. Overview of commercial food processing and preservation in Africa

The growth in demand for food in Africa for the past three decades requires effort to meet the greater portion of the demand from the continent and possibly all the inhabitants. Within the same

![Production volumes of each commodity group, per region (million tonnes)](This is a placeholder for the actual image)

*Source: FAO 2011*

period there have been considerable increases in agricultural activities resulting in increased food and animal production annually. Africa’s current strength lies in cereal, roots and legume and fruits and vegetables as the figure below indicates (Gustavsson et al. 2011: 4). According to Andah (2000: 9)

The major thrust of African government strategies and agricultural research and development programmes has been to increase yields rather than make optimum use of what is already available.
There is no doubt that the agricultural growth achieved in production over the past 50 years has for example, seen maize grown from below 15 million tonnes to around 50 million tonnes per annum (The International Bank for Reconstruction and Development/The World Bank Report 2011: 7). Other grain products such as rice, millet and sorghum increased in production but not significant compared to that of maize.

Taking maize as the major cultivated product in SSA over half century there remain no effort at converting maize into products that makes it easy to keep for longer period and easier consumed without much cooking processes. Many African women still have to carry bowls of maize to the mill by walking distances and going through same old processes and time consuming cooking methods. How can some products like sorghum and paddy rice be processed that the amount of energy used by consumers to cook and other ups and downs are eliminated at minimal cost in processing the product to achieve that quality?

Andah (2000: 9) points out that,

Food processing helps to preserve food, reduce post-harvest losses and to extend the availability of food products over a longer period. In this way, the hunger gap is reduced between the harvest period and the lean period when prices of food shoot up and put many people at nutritional risk.

Modern technology has contributed in improving food processing in Africa and elsewhere, whilst indigenous methods remain crude and requires improvement by Research and Development (R&D). It is a considerable concern that the ordinary African has learnt to accept and adapt to eating imported processed exotic food items; little is done by African policy-makers to the improvement of post-harvest food output by processing for easy storage, usability and safety consumption.

Since the liberalisation era, many African governments with sound agricultural policies have not taken advantage of the global market liberalisation policy to attract industries or encourage local entrepreneurs that add-value to primary products which includes agricultural produce. For example India with its gigantic population is still expanding and improving strategies on its food processing policy, thus:

After liberalization several policy measures have been taken with regard to regulation and control, export and import, fiscal policy, exchange and interest rate control taxation, export promotion and incentives to high priority industries. Food processing and agro industries have been accorded high priority with a number of important relieves and incentives. (Indian Government Policy).
Measures taking to support the above policy have been the Regulation and Control, e.g., ‘Most of the processed food items have been exempted from the purview of licensing under the Industries, Development and regulation, Act, 1951, except items reserved for small-scale sector and alcoholic beverages’; Fiscal policy and taxation, e.g., ‘Custom duty rates have been substantially reduced on food processing plant and equipments, as well as on raw materials and intermediates, especially for export production’; and Export Promotion (National Food Processing Policy – India). So India among some other East-Asian countries has achieved growth in primary agriculture products processing and have benefited from the liberalisation era. A study done by Rolle (2006: 32) shows that ‘Dried and canned mushrooms produced in China, currently account for 52% of world trade in processed mushrooms, while canned pineapples produced in Thailand accounts for approximately 45% of that product in world trade’. South Africa, the most industrialised agro-processing country in Africa has to face stiff competition of cheaper finished food items from the East after deregulating its finished food market (Atkinson et al 2000: 42). In South Africa according to Agriculture and Agroprocessing Sector Working Group,

The manufacturing industry contributes about 37% to the GDP, of which 25% comes from agroprocessing. In 1997, the turnover of the South African food and beverage processing sector was R72 648 million.

On the other hand the figure below show South Africa has seen undulating trend in food processing industries due to restructuring challenges and cheaper unrestricted imports (Mathers 2005: 4-5). The food processing sector with such enormous potential for food security, job creation and contribution to overall economy has stalled appreciably. There has been decline in employment (-1.7%), outputs (-2.8%) and in gross salaries (-1.7%) in the food processing sector.

The rest of African states face significant post-harvest losses and wastage in terms of perishables fruits and vegetables. Even in the area of roots and tuber, and cereal which African region does well in production there is high degree of post-harvest losses as the figure below shows.
According to Gustavsson et al. (2011) the ‘Lack of processing facilities causes high food losses in developing countries’ with Africa being a major loser. Even where there are food processing industries their processing capacity does not enable them to meet market demand whilst available harvested products perish in the waiting as seasonal products. The limited capacity has been attributed to ‘...the cost of investing’.

Tanzania, for instance, is known to have 30% of cereals and 70% of fruits and vegetables lost every year due to poor handling, storage and processing (Filou 2011). Zambia after surrender to IMF/World Bank HIPC policy by privatising state industries which included food processing ones with the hope of achieving growth. The country has less than ten percent (6%) of industries in food processing. These are centred mainly in Lusaka. The Zambian growth has turned a mirage with hunger prevalent in the country and many food industries face marketing problems due to inadequacy in policies that impact negatively on food industries, especially the SME ones (Atkinson et al. 2000).

So, with this cursory overview of the food processing and preservation in Africa, particular SADC, we will explore the prospects of viable food processing industries on the continent, first by a glimpse on historical antecedents concerning the African attitude to food preservation and the European gains capitalising on processed food consumption and export.
b. Historical antecedents – Africa vis-a-vis Europe on processed foods

The commercial environment of historical Africa featured much of gold mining and metallurgy and trade in salt and cola nuts, skin and hides. Asia and Arab traders encounter with the continent and the subsequent overwhelming capture of commercial activities by Europeans on the continent varies with trade across North Africa dating from the BCs and 18th Century AD along the West and East African coast and reaching later the hinterlands. Notably preserved food items form part of the initial interactions between the European explorers and local African people. The borrowing of the Portuguese word *paanoo* (bread) by the Akan speaking group in Ghana those days imply the Portuguese had introduced some food items either free or exchanged for some other items and similarly done by other Europeans on their exploration (Yirenkyi 2011). The introduction of processed sugar juice into sugar granules and cubes and tea leaves and coffee naturally captivated the Africans.

Again in West African Gold Coast (Ghana) area smoked and solar dried fish has been ideal way of preserving sea foods for sale in the hinterlands. They are also treated with salt to minimise contamination through human, etc.. They process some staple tuber like perishable cassava into granules after solar drying and fermentation; and fermented maize dough preserved by wrapping with leaves and boiling also served to preserve them for up to one month depending on several other climatic conditions. Fire and solar dried meat in the Savannah region with low humidity has been a way slaughtered animal has also been preserved. Mroso argues that,

Traditional African drying methods include spreading the material on flat stones, linen, canvas, wire-mesh, or leaves and even on the soil. Products dried in this traditional method are subject to spoilage from unsuspected or abrupt rains, windborne dirt, vermin, vermin excrement, insects, insect parts, and worms including dirt from the activities of the workers. Toxins can also develop in such uncontrolled drying set-ups leading to degradation of quality beyond edibility. This way of preserving food by drying on open systems is unhygienic with detrimental bearing on consumer acceptance and competition in commerce.

This aspect of low hygiene that has characterised indigenous method of food preservation has diminished the attractiveness of African traditionally preserved food products beyond the local context. Some questions that come to mind is, was there food market and food export and in what form as trekking took long periods. Without any palpable answer, we could agree that the availability of fresh food products stifle better innovations in food preservation in generally historic Africa. But with growing population (967 million – mid-2008 estimate) at 2.4% growth rate (Population Reference Bureau and African Population & Health Research Center 2008: 2), diminishing investment in food processing and preservation, and virtually lack of effort at processing and preserving harvested products will lead to high importations (White 1999: 6); Africa, despite the prospects of becoming world largest food exporter will continue to starve some of its growing population, and could remain foreign relief food damp for long period than expected.

The mercantile policy that national strength is increased by preponderance of export over imports saw the British expanding their trading arena (Grischy 2010). Generally, European states making more income through export of finished products and import of cheaper raw materials has been another factor that stymied local food products development just as it did to other agricultural and mining sector products in Africa. Whilst this policy was not applied in Africa alone, Africa has
suffered much due to many other factors combined to make inhabitants of the continent vulnerable to trade externalities from dominant global market forces.

Africans in the aftermath of mercantile policies acquired taste for imported foods (Krassowski 1974: 8), with many post-Independence African governments spending more on food imports than developing local food products for local and export consumption. Whatever lessons learned the challenge confront African societies and government with the economic fallout from the past mistakes. The Americans have believed in “Eat what you can and can what you cannot”. Similarly, for the continent to be capable of meeting its growing food requirements demands measures and policies that eliminates wastage and losses due to unprocessed fresh and perishable agro-food products, fish and meat. If the mercantile policies have any lesson at all aside its negative impact on the African creativity, it will be the challenge to rethink and make Food Security policies that make it easy for expanded role players (private industries) to process excess post-harvest food products for local consumption and export.

c. Commercial food processing and preservation policies and impact on food security and economic activities

There has been adequate pressure put on African states through Banking Institutions, NEPAD-CAADP, International Research Institute (IRRI), and International Food Policy Research Institute (IFPRI) to ensure pro-development food security and agricultural policy. What many African states governments have not yet understand is the economic vulnerability in terms of acute reliance on high food imports due to excessive local losses. The data above showing gaps of food loss weakness requires collective regional policy approach which will require sharing technological resources and liberalising made in Africa processed food market across the Region. Otherwise African states could pursue policies that are focused on increasing Industrial Parks for food processing through encouragement of local investments with collateral incentives as India has done. Besides the local regional market the enormous population of African immigrant in the Western World is major market target as that already exists informally.

Africa need increased local processed food products; and the volume with growing population cannot be met by the current food security policies that are inadequate passive or silent on expansion and growth in private investment in food processing industries (large and small scale ones). The African Development Bank Group Report (2008: 17: 12) indicated the Bank’s plan of support thus,

In the medium to long term, the Bank will continue to support increased agriculture productivity through diverse instruments, such as...reduction in post harvest losses and increased agro-processing...

The Report acknowledges that with agro-processing industries the ‘strategic partners, who often operate processing facilities, offer ready markets for the produce of the small holder farmers’. The food processors benefit the state by saving ample amount of foreign exchange in food imports. By encouraging industries whose activities ensures some cut in import spending is a boon to economic development and growth in real fiscal terms. A recent example has seen RSA government appealing decision by its regulatory body, Competition Tribunal in the R16.5bn purchase of 51% of discount retailer Massmart takeover deal. The SA government required imposition of ‘targets for using local
suppliers on Walmart. Without such targets, they maintained, the deal could lead to lost revenue and jobs for local manufacturers' (Reuters 21 July 2011). India e.g., limits import supplement into food processing industry to 20% (Kachuru undated). African governments cannot operate state owned industries in contemporary economic order; rather the state position should put in place instrumental mechanisms that ease investment in such industries, quality control and safety measures.

21st Century challenges and food processing and preservation industry as key to African Food Security and job creation

a. Global population growth and food requirements – Africa’s share

Noted again, the trend of population growth in Africa requires strategies that will ensure that current food shortages and high prices are brought under control. The strategy should ensure the growing population can meet the required food needs daily. Utilising food resources should not impact negatively on human health through the process of preparation. Food preparation at household level should not consume excessive energy or contribute to high energy cost and environmental degradation. Africa’s potential to ensuring effective food security and food utilisation that is safe cannot be over emphasised with the availability of arable land and water bodies. The current level of post-harvest wastage alone if not resolved through the use of appropriate technologies and methods that preserve food for longer period will prevent Africa from achieving sustainability in food security today and in the future. Currently the status of post-harvest wastage from African countries indicates less policy commitment to address food security by food preservation and processing that has commercial returns and energy efficient (in terms of cooking time using various available energy inputs).

<table>
<thead>
<tr>
<th>Produce for 16 countries of Eastern and Southern Africa (Million tons)</th>
<th>Average Local Prices (US$/ton)**</th>
<th>Estimated Value of Production (US$ million)</th>
<th>Regionally Estimated Average % Weight loss</th>
<th>Value of Weight Loss (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>12.71</td>
<td>104.71</td>
<td>5.62</td>
<td>11.5</td>
</tr>
<tr>
<td>Sorghum</td>
<td>2.02</td>
<td>256.02</td>
<td>0.11</td>
<td>11.8</td>
</tr>
<tr>
<td>Millet</td>
<td>1.67</td>
<td>308.34</td>
<td>0.10</td>
<td>11.7</td>
</tr>
<tr>
<td>Rice (paddy)</td>
<td>2.55</td>
<td>406.53</td>
<td>1.36</td>
<td>11.5</td>
</tr>
<tr>
<td>Wheat</td>
<td>1.25</td>
<td>274.36</td>
<td>1.44</td>
<td>13.3</td>
</tr>
<tr>
<td>Barley</td>
<td>1.71</td>
<td>281.53</td>
<td>0.94</td>
<td>9.9</td>
</tr>
<tr>
<td>Total</td>
<td>66.18</td>
<td>10,960</td>
<td>1,594</td>
<td></td>
</tr>
</tbody>
</table>

Note: *Countries included are Botswana, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe.

Source: Calculations based on FAO/STAT and APHIS data.

Eastern and Southern Africa post-harvest weight losses monetary-value estimate reaching $10, 960 million requires a collective regional or sub-regional policy that does not only encourage and promote private participation in food processing and preservation, but make it considerably easy with appropriate incentives. Salvaging the enormous loss of fiscal value will have positive returns impacting on health, education, transportation revenue, and job creation, and other socio-economic benefits.

b. Effective outcome-based policy towards expanded food processing industries
Effective result-oriented policies are driven by a political will. In Africa which is a developing region achieving optimal policy goals requires shared approach that brings all stakeholders within individual states and even those across Statal boundaries together. The recourse to workable and results-oriented policy for expended private investment food processing industry requires inter-sectoral collaboration that brings different spheres of government together. Atkinson et al (2000: 20) noted,

The expansion of food processing activity is important for increasing inter-sectoral linkages and, more importantly, for improving food security.

So there cannot be a pro-active state on ensuring food availability and access to food by all people without effective governmental institutions collaboration and beyond that sphere. The promotion of food processing in particular requires not only cross-sectoral collaboration but desirable political efforts. A commitment to improve or maximise food processing output and preservation for local and export market therefore, requires state partnership with the private sector, Research and Academic Institutions (emphasis on Research and Development (R&D))(Agriculture and Agroprocessing Sector Working Group undated: 59). The state role could be to ensure less red-tape frustrations and easing procedural processes that contribute in cutting down on investment cost, and quality and safety controls. This will depend on various reasons, for example, according to Najafi (2006: 72) the government role in promoting food processing industries should focus on:

Regulatory: Specification of the rules by which market enterprises must abide in the mutual interest of producers, traders and consumers; Facilitating: Development and implementation of programs designed to assist marketing systems in providing improved service to users. Such programs may include both regulatory and facilitating elements. A particularly good example of this is the regulatory nature of quality grading requirements and compulsory standardization of packages on certain commodity markets which facilitate trading through description and market news; [and less] Interventionist: Government entry into the purchase, sale, storage and movement of traded commodities, either to influence their pricing and movement or to supplement existing market channels and increase competition.

The role demanded of governments and related institutions cannot be effective without the right perspective of its economic investment position and the understanding of the market forces and their implications for both macro and micro-economy.

The expansion in commercial food processing does not only ensure preservation of food but contribute to expand productivity and growth in the general agricultural sector, and various related economic activities. Atkinson et al (2000: 20) say,

Agricultural productivity will not increase while industrial output declines, and vice versa.
(See also The African Development Bank Group Report 2008: 12)

In this wise the focus on agricultural expansion drive should go with policies that encourages easy establishment of food processing industries by both big industrial and Small-scale Enterprise industries. This has been the focus of the Indian government as noted in Choudhury (2006: 21),

The Government of India is committed to providing a massive thrust to food processing and other agro-based industries in an endeavor to increase the income of farmers, create employment opportunities, diversify the rural economy and foster rural industrialization.
The food processing industries have capability to stimulate local economy. Their role serves to eliminate much of the harvest wastage, improves longer storage and cheaper price which helps consumers to buy and store when they have money at hand. As the industrial demand for primary products increase, so the collateral benefits to farmers to increase their output without fear of loss and wastage within favourable and appropriate policy conduits. In East-Asia industries and private enterprise in food processing engage contract farmers and groups to provide their raw materials which is labour intensive and economically rewarding. The examples from Indonesia’s

<table>
<thead>
<tr>
<th>Country</th>
<th>Industry</th>
<th>No. of farmers</th>
<th>Product</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Java</td>
<td>Supermarkets/wholesalers</td>
<td>450</td>
<td>Potatoes</td>
<td>20 tons</td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
<td>200000</td>
<td>Sugar crop</td>
<td>4mil tons</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td></td>
<td>15000</td>
<td>Gherkins</td>
<td>12000 tons</td>
</tr>
</tbody>
</table>

Source: Extracted from Vinning and Young 2006: 57

Western Java, Thailand and Sri Lanka are provided in the figure above. So, the above issues and factors raised serve as motivation and guidance at a time that African policy-makers need to take advantage of the crisis in the Western Economic Power Houses and use agro-processing to reinvent and enhance Food Security policies and make economic scores by re-generating agri-business and market across frontiers of African states and for export.

c. Benefits for job creation and expansion in income earning

There is such massive unemployment and the cry over no income for average households in many parts of Africa, especially in SADC states. It is in the face of this challenge that the additional benefit in the creation of jobs through the need for more labour on farms and industry can be achieved through increasing commercial food processing activities. In Zambia and Mozambique food processing industry took 35% and 19% respectively of the economy and provide significant outlet of labour and income in the 1990s. Mozambique within the same period food processing industries accounted for 48% of manufacturing sector workforce and 20% nationally. The sector also accounted for 43% in wages in manufacturing sector (Atkinson et al 2000: 15). There is an estimate that 14% of workforce in Europe comes from the food processing sector (Kachuru undated: 114). Atkinson et al (2000: 20) confirm the

[d]egree of preservation through appropriate post-harvest strategies and enhanced value added through processing activities could contribute to an increase in both employment and income levels.

Job creation and its positive impact on the employment sector is not also guaranteed unless there is adequate policies that regulate fair wage level in the agro-food processing industry. In South Africa there have been occurrences of farm labourers especially being woefully paid inadequate wages and the salary value declining within some food processing industries to retain workers as they face competition from cheaper processed food imports. The decline in food processing industries in Zambia and related industries e.g., has resulted in risen unemployment. Hertel (2006: 18) conclude on Agricultural trade liberalisation review that ‘[p]oor infrastructure and high transactions costs serve to insulate rural consumers from world price rises, while penalizing exporters’. As Zambian
main economic stay depend on foreign export its policies failure to improve local transaction cost, uneasy spatial accessibility dangles its economic stability in industrial marketing output. The same applies to Uganda as noted by the preceding author where,

... series of trade policy reforms over this period [1994] largely eliminated the implicit taxation of exports through trade policies, the implicit taxation due to poor infrastructure and high transport costs remained very high relative to competitor countries such as Kenya.

Such policy, impacts on job creation with respective rising cost in agricultural products e.g., and changes in prices demands increase in wages. But how many jobs can be sustained under such producers’ and manufacturers’ diminishing profit margin?

d. Utilizing modern technology to enhance food processing and preservation

There have been various views on the type of technology and appropriateness. CSIR and Academic Institutions could provide advisory and investigation regarding appropriateness of required technology within geographic context taking into consideration skills available to handle appropriate technology. Skill development regarding agro-food processing can benefit from Financial Institutions’ support. For example, the ADB Group (2008: 10) Report contains a commitment to such projects where the Bank facility will focus on,

....interventions in Technical & Vocational Training to target the strengthening of human capacity in the area of post-harvest management and food technology in relevant programs.

Similar intervention in this direction through other stakeholders such as NGOs could go far to mitigate the fallout in food losses and wastage in Africa. A ready market of trained skills will encourage private stakeholders to invest in food processing with cut in the cost on training new staff or renting expensive expatriates or imported skills.

e. The role of indigenous approaches in food processing and preservation

Indigenous methods of food preservation in many parts of Africa vary but generally not without serious problems (Mroso 2003). It goes with unhygienic and unattractive methods making most indigenous preserved food products unsafe and hazardous for consumption outside the context of production. The indigenous methods have their own benefit which Andah (2000: 11) explains ‘[t]hrough indigenous food processing, certain food crops in a very complex indigestible form are transformed into simpler digestible forms’. Mroso remarked that ‘a natural process like fermentation with such potential is not fully exploited’ scientifically as indigenous knowledge capital.

The improvement of indigenous food preservation methods for longer lasting, quality, safe and wider marketable products falls under R&D intervention. Notwithstanding this weakness, indigenous knowledge in food processing and preservation have been successfully applied and contributed to building on methods used by Small-scale foods processing Enterprise in Limpopo Province, SA. Lorunda (undated: 22) explains that food processing in SA has ‘mix of technology levels and skills available, and opportunities exist for companies to become or remain internationally competitive’. That incorporates indigenous knowledge and skills. The SMEs can build on variety of culinary taste as capital and serve as competitive basis with bigger industries, if necessary. Certainly it raises the issue of intellectual property right which comes under the state statutory policy.
f. Challenges and Constraints

Some problems and limitations cannot be overlooked in the drive to enhance the promotion of increased private participation in food processing industries across Africa. Najafi (2006: 73) further argues,

Notions of agricultural marketing held by national policy makers are often based upon inaccurate information and half-truths handed down over the years which are accepted without question.

The author explains that officials at policy level seldom lack ‘understanding of the marketing links’; and that tie to,

... the lack of coordination of responsibilities for agricultural marketing and the dispersal of these responsibilities among various ministries which results in the duplication of effort.

Such intangible management and administrative gaps where it applies, affect and remain hurdles confronting promulgation of effective and efficient policies to promote growth in commercialisation of food processing industries in Africa today.

An enhancing and outcome-based policy perspective should relatively prioritise food processing and preservation in Food Security policy. A remedy to the gaps that displace the centrality of food processing and preservation Najafi (2006: 73) suggested

A marketing development unit is also required to undertake the planning of facilities and services in order to cater for the expansion of farm production in line with population growth. Improved transportation services, storage, drying and processing facilities, additional finance for marketing, consumer surveys, new marketing institutions and adaptation.
In African states where accurate marketing information exist and mechanisms are in place to provide reliable data there is variance in the trend of activities directed at promoting food processing industries and entire agri-business. For example, Atkinson et al (2000) show Zambian failure in agro-processing industries contrary to growth in Mozambique can be linked to reliable available marketing information. Such a system depends on high level departmental and institutional linkages; and without improved inter-sectoral collaboration with other stakeholders on streamlining food security policies, by increasing the focus on “optimum use of what is already available”; it would be difficult to achieve the goal of mitigating hunger in Africa by improving food availability and food accessibility by all people.

Some other visible limiting factors that could plague the food processing industry and related ones include:

- High cost of capital and limited access to finance to purchase large quantities of raw materials;
- High crime rates and stock thefts (in the case of SA and Lesotho in particular);
- Lack of technical market information; limited access to, or awareness of, available marketing information in order to address some of the problems; often, small-scale processors rely on informal channels for their information;
- Limited managerial technical and administrative skills especially at the micro and small scale level. However by combining well-established principles and appropriate equipment with good standard of quality assurance and hygiene these categories of food industries should be able to produce high quality marketable products;
- Raw material constraints. Seasonality of raw material is the main supply constraints, except for the bakery subsector, which does not obtain its primary inputs directly from the agricultural sector. Aside from this there are limited storage capacity particular at the micro-enterprise and small scale level.
- No control over raw material post-harvest activities, resulting in poor quality;
- Lack of reliable transport arrangements for timely deliveries;
- Competition with traders when purchasing raw materials;
- Unable, because supplies are seasonal, to obtain sufficient raw materials for production to meet targets. (Source: Olarundo undated: 12; Atkinson et al 2000: 9).

Majority of the listed challenges could be surmounted with the right regulatory policy and state facilitation as explained above rather than overt intervention that are miscalculated and deviate from the prevailing global economic order.

**Quality Control and Consumers’ Safety Policy and Enforcement for Local and Export Drive**

As earlier mentioned above the competitive diversification in food processing should go with quality control and consumer’s safety policy and its enforcement. The incidences of false labelling to attract buyers are a breach of trust to consumers. Generally, consumers are willing to pay for what they find good for their health and safety. Consumers vary from those living in metropolis to rural and those living highly hygienic environment in technologically advanced countries to less hygienic in many Developing World; thus, the standard requirement of processed food and food generally also vary. For example, subterranean fermented skin and fish spices in some parts of West Africa will be a serious abomination in the Western World or South Africa. But with the trend in migration and globalisation the need for exporting cultural products which includes food items has called for
regulatory standards to be met before certain food items can reach export destinations in different countries and regions; e.g., Hazard Analysis and Critical Control Point (HACCP) which is approved internationally ‘recognized system for the management of food safety for all companies involved in the production, processing, storage, and distribution of food for human consumption’ (Asian Productivity Organisation). HACCP has its costly legal challenges for adoption by SMEs and that is where government could provide instrumental intervention whilst ensuring regulatory compliance.

In South Africa health and safety regulation on imported food and processed food items have been strict. Countries like Botswana and Namibia that exports bulk of meat products meet the International Sanitary and Phytosanitary (SPS) Agreement (part of GATT convention). Custom requirements include safety declarations and specifications. The rule is to ensure that in as much as the country meets its export processed food safety standards, similar items entering the country can guarantee consumers’ safety, which guarantees the protection of International consumers within stipulated frameworks that ensures:

- Product to come from a disease free area
- Inspection of products
- Specific treatment of processing of products
- Setting allowable maximum levels of pesticide residues or permitting the uses of only certain additives in food. (Kachuru undated: 125)

Corrupt Custom officials have ignored some of these requirements in many African states even though the rules may exist. Our focus is on ensuring both the safety of locally consumable processed food and exportable ones. For African countries to grow their economies by entering into the greater international value-added food market there is the need to meet export safety standards even within the region. The East-Asian case examples below bring some elucidation.

The Thailand processed food market has attracted wider international community. According to Chamchong (2005: 161) the Thailand government had to meet the strict International regulatory safety requirement for processed food acceptance which states:

The strategy [of Thailand government] was to gain greater access to world markets. However, even though non-tariff barriers were lowered in international markets, exporters had to meet strict food safety standards. As a result, exporting foodstuffs became more difficult. Different countries in the world markets have different safety requirements. To meet all of their requirements, there is generally an international standard issued by the Codex Alimentarius Commission to be used as a guideline in formulation of food regulations. Any exporter whose product safety standards comply with this standard, would likely gain acceptance by the importing country. As a result, the Thai Government assigned some government services/organizations to assist them in extending and improving the quality (through GMPs and HACCP systems) of all important foods and to adopt similar standards to facilitate and protect their trade.

These regulations have been streamlined for regulatory purpose and regularly updated which ensures that ‘basic environmental and operating conditions that are necessary for the production of safe and wholesome foods including facilities and location, cleaning and sanitation programs, training, traceability and recall, pest control and management commitments’ (Chamchong 2005: 161).
India has Bureau of Indian Standards (BIS) which has categorised the agro-processing industries and regulates their processed food outputs standards and packaging among other requirements. The BIS oversight is in twofold: a) formulation of Indian standards and b) their implementation through its voluntary and third party certification system. The organisation ‘has on its record over 700 Indian Standards related to food-grains and their products, bakery and confectionery items, sugar, edible starches and their products, processed fruit and vegetable products, protein rich foods, stimulant foods like tea, coffee and coca, alcoholic beverages, spices and condiments and food products of animal origin like milk and meat, fish, poultry etc’ (Kachuru undated: 125). Besides the Indian Standard regulates ‘thermoplastics namely, polypropylene isomers and ethylene acrylic acid have been published which describe the requirement of the particular thermoplastic and necessary additive along with their limits’ (Kachuru undated: 125). Labelling is required to provide adequate information specifying active contents and their levels. India has signed SPS since 1994.

In Africa, food items export in some sub-regions such as ECOWAS and others have been liberalised without much standardisation merits. But to ensure effective competitiveness in meeting global market requirements requires strict quality control adherence and consumer safety measures under SPS or HACCP.

The way forward and conclusion for agricultural business growth

In most SADC states agro-processing industry remain the priority choice of private investment but requires enhanced policy climate (Atkinson et al 2000: 25), taking into consideration the economic significance and potential of the food processing sector has with few examples of states cited above these policy suggestions have been provided.

The first major strategic need is system of information on agriculture, agri-business, business climate, consumer price index (CPI), suppliers’ database, related export and import information pool, weather forecast, and early warning systems on pest and other biological contaminants. The fact that there remain some states that cannot in the interim finance such a system could then benefit from a regional info-data project. The onus shall be on each individual state and government to ensure regular update of data repository and reliable information. Such a system should be mobile phone-friendly which makes it cheaper and faster to access information.

There should be commensurate concern given to food processing just as there is now for food production. This direction should be captured and made visible by pro-development and pro-active policies targeting food processing as essential and timely economic activity capable to provide solution to rising unemployment, rising food prices and food shortages. Public policy targeting the increase in food processing industry should focus much on enhancing the output of SMEs, which as evidence shows have contributed in creations of employment and playing a critical mediatory role between production systems and big industrial plants in secondary materials supply. The SMEs should be consistently encouraged to position themselves not necessarily in competition with big industrial plants but rather serve to provide secondary processed material inputs to minimize importations by big companies.
Finally, a critical consideration as discussed in Najafi (2006) is the repercussion of uncoordinated policies from different Departments and Ministries. The insidious effect of lack of coordination in the public sector and wider more with the private where it is required undermine the entire objective of using well formulated policies to solve problems. Effective coordination to impact strategic commercial food processing industries should be planned mobilise intra-state stakeholders and partners and larger regional platform that facilitate regulatory monitoring and market deregulation that does not lean in favour of particular regional dominancy. Such a concerted effort could galvanise regional trade force to leverage other international import competition. This is where SADC in particular has experienced its failure in uncoordinated international trade agreements beyond the region. The impact falls on local SMEs in particular, especially in the food and agricultural sector.

In conclusion, the presentation focus on providing evidence of food losses and wastage of post-harvest food products in Africa, which is used to justify a need to galvanise a concerted policy drive to remedy the situation. The study conducted based mainly on secondary sources elucidated the rational, economic, socio-political and strategic justification for outcome-based policy imperative to mitigate the post-harvest huge fallout in food production surplus in Africa by the promotion of effective food processing industries. The paper attributes much of the encumbrance to lack of political will and general laisser-faire. By a peep into the façade of historical antecedents the unlearnt lesson where Africans could not brace and take countervailing advantage of the mercantile adventurism has been attitudinal one; too much at ease to do something for long-term benefit. Today, the rancour of faces of hunger and malnutrition, the rising unemployment and crime can be said to be side-effects of accrued losses in agricultural output and untapped potential. The paper takes the position with the African adage that if one knows how to wash your hand then you can take part in the big supper. Yes, Africa can prove its maturity and independence if only the continent’s policy-makers will seek better understanding first, clarify shady issues, ensure such information is available to all the public and reliable, and use that to pave the way for sprawling food processing industries with their input and output benefit, then a new dawn we can say has began in Africa to face out hunger and malnutrition as history and bygone. Africa has much to learn from compatriot East Asians and Africa can make headway certainly without fail.

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