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Trade and investment in fish and fish products between South Africa and the rest of SADC: Implications for food and nutrition security

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PLAAS Working Paper 47: Trade and investment in fish and fish products between South Africa and the rest of SADC: Implications for food and nutrition security

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ABSTRACT

This paper looks at the dynamics of intra-regional trade and investment in fish and fish products between South Africa and the rest of the Southern Africa Development Community (SADC) region, and the implications of this trade for food and nutrition security. It is based on key informant interviews with people in the food industry in South Africa and Africa regional economic bodies. Imports and exports of fish in South Africa are driven by import substitution, shortfalls in local production, and meeting growing local and regional demand. Most South African fish and food processors prefer to export, rather than establish plants in other African countries, mainly due to factors of economic efficiency and the challenges of doing business in these countries. Currently, however, increasing volumes of fish are being imported into South Africa to meet demand from the African migrant community. While self-sufficiency and food sovereignty are acknowledged priorities for the Southern Africa Development Community (SADC), imports to meet local shortfalls and specific demand ought to be acceptable options for ensuring fish food availability and affordability. The reduction or removal of tariffs, through regional free trade agreements, promotes increased intra-regional trade. Overall, imports and exports provide for demand-led exchange of fish between SADC states, which promotes increased availability and affordability of fish; thereby contributing towards food and nutrition security. However, despite regional free trade agreements that have stipulated the removal of both technical and non-technical barriers, most small-scale traders still experience problems in conducting cross-border trade. The majority of people in both South Africa and the SADC still rely heavily on the informal sector for conduct business and buying food provisions. This includes cross-border fish trade, which is dominated by small scale-traders, the majority of whom are women. The informal sector ensures that food reaches most people in an acceptable state, form and price. In order to promote and facilitate improved and efficient fish trade delivery systems and positive benefits for food security and livelihoods, governance of cross-border trade ought to be based on flexible regulations and improved implementation of these.

Keywords: Fish trade, availability and affordability, informality, import substitution, economic efficiency, food and nutrition security.

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1. BACKGROUND AND INTRODUCTION

Fisheries are important for provision of protein, livelihoods and economic growth, especially among the rural and poor populations of Africa. In 2010, the total fish production for the whole continent was estimated at 9.4 million tonnes (FAO and NPCA, 2014).

An estimated 12.3 million people were employed in capture fisheries and aquaculture sectors in 2010 as fishers (50%), traders and processors (42%) and fish farmers (8%) (FAO and NPCA, 2014; AUC-NEPAD, 2014). Fish contributes an average of over 33% of animal protein in Africa (WorldFish Center, 2009). In terms of volume and value, fish and fish products contributed 19% and 5% of total agricultural exports respectively in 2013 (AUC-NEPAD, 2014).

Fish is a rich source of easily digestible high-quality proteins containing all essential amino acids. In addition, it provides essential fats (for example long-chain omega-3 fatty acids) not found in most other protein sources, vitamins (D, A and B) and minerals (including calcium, iodine, zinc, iron and selenium), particularly when eaten whole. Fish is usually high in unsaturated fats and thus provides health benefits, especially protection against cardiovascular diseases (FAO, 2016).

Fish also aids foetal and infant development of the brain and nervous system. Even when taken in small quantities, which is the case in many low-income, food-deficit countries (LIFDCs) and least-developed countries, fish can have significant positive nutritional impact on plant-based diets. With all these valuable nutritional properties, fish can play an important role in correcting unbalanced diets and in countering obesity (HLPE, 2014; FAO, 2016), which is one of the growing problems in some SADC countries, such as South Africa (Shisana et al., 2013).

Although annual per capita fish consumption increased steadily, globally (from 5.2 kg in 1961 to 18.8 kg in 2013), it is still considerably lower in LIFDCs (from 3.5 to 7.6 kg in the same period) (FAO, 2016). Per capita fish consumption for Africa in 2010 was 9.1kg, less than half of the global average (AUC-NEPAD, 2014). Except for Mauritius and Namibia, per capita fish supply for all other SADC countries remains grossly below the global average and also below the average for Africa (Table 1).

With most global capture fisheries at maximum (sustainable) production levels, or even in decline, and aquaculture in most African countries not providing a growth area to bridge the increasing gap between demand and supply (FAO, 2016), trade is increasingly seen as a way to meet shortfalls in national fish supply. In effect, trade in fish and fish products among African countries is becoming increasingly recognised as being important for the continent's food¹ and nutrition² security (WorldFish Center, 2013, AUC-NEPAD, 2014; Tall, 2015).

¹ Food security refers to affordable access to adequate nutritious healthy food for everyone in the population.

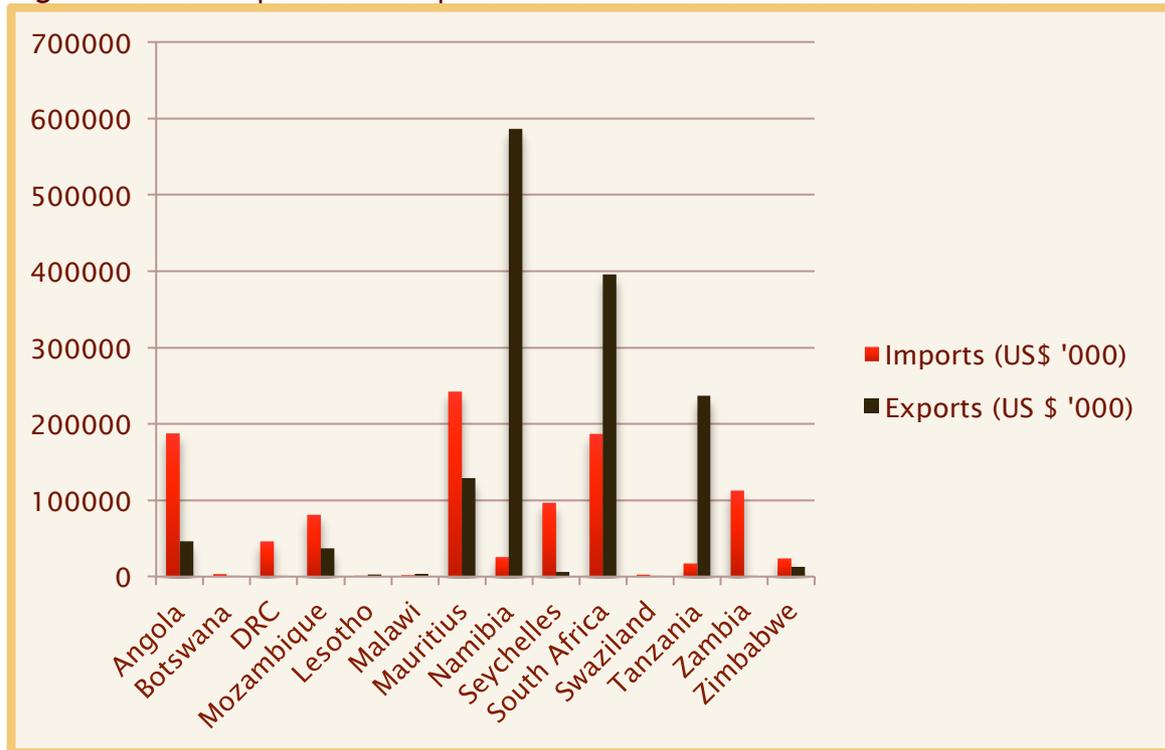
² Nutrition refers to the food value (content) of what consumers eat across food types (e.g. carbohydrates, protein, vegetables, fruit, fats, etc.) for a balanced diet.

Table 1: Fish per capita supply for SADC countries

Country	Per capita fish supply (kg/person/yr)		
	2005	2010	2015
Angola	12.1	14.7	14
Botswana	2.8	3.6	3.0
Democratic Republic of Congo	5.5	4.0	6.0
Lesotho	0.9	2.0	1.0
Madagascar	7.1	6.8	6.0
Malawi	3.6	7.0	7.0
Mauritius	17.2	22.0	23.0
Mozambique	5.0	8.50	18
Namibia	13.1 (for 2000)	11.9	13.6
South Africa	5.0	7.5 (for 2009)	6.0
Swaziland	2.0	2.4	2.0
Tanzania	5.5	7.7	6.0
Zambia	6.79	6.9	7.0
Zimbabwe	2.0	2.2	3.0

Source: <http://www.fao.org/fishery/facp>

Global trade in fish and fishery products has expanded considerably in recent decades, fuelled by growing fishery production (in particular, aquaculture in China and Asia) to meet the demand from a growing human population (ITC, 2015; FAO, 2016) and also from eating habit and lifestyle changes away from red meat and towards white protein. Fish and fishery products represent one of the most traded commodities in the world food sector, with about 78% of seafood products estimated to be traded internationally (FAO, 2016). In 2015, world seafood exports totalled US\$101 billion, while imports were US\$97 billion. SADC countries exported US\$2.8 billion and imported US\$1 billion worth of seafood in 2015 (ITC, 2015) (see Figure 1 below).

Figure 1: Fish imports and exports for SADC members states for 2015

Source: ITC, 2015

Figure 1 indicates that South Africa and Namibia are the largest fish trading nations in the SADC, followed by Mauritius, Tanzania and Angola. Whereas Namibia and Tanzania are largely exporting countries, South Africa imports nearly 50% of the volume of its exports. Mauritius is the largest importer of fish in the SADC, followed by Angola and South Africa.

Africa's Regional Economic Communities³ and the African Union's New Partnership for Africa's Development (NEPAD) have prioritised the strengthening of regional (Africa) trade, given that trade among African countries is only about 10% of the continent's total exports (AUC-NEPAD, 2014). In this context, fish and fish products have been identified as key commodities for intra-Africa trade investment and policy support (WorldFish Center, 2013; AUC-NEPAD, 2014). The fisheries sector has also been included in the NEPAD Comprehensive Africa Agriculture Development Programme (CAADP)'s aim of achieving a 6% annual growth in Africa's agricultural GDP (FAO and NPCA, 2014; AUC-NEPAD, 2014).

The 1996 SADC Protocol on Free Trade (SADC, 1996) led to the establishment of a Free Trade Area in 2008^{4,5} as part of the SADC's agenda for regional integration and eradication of poverty. The establishment of the Free Trade Area resulted in the signing of free trade agreements among member states that reduced tariffs on 85% of intra-

³ These are comprised of: Arab Maghreb Union (AMU/UMA), Economic Community of West African States (ECOWAS), East African Community (EAC), Intergovernmental Authority on Development (IGAD), Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA), Economic Community of Central African States (ECCAS) and Community of Sahel-Saharan States (CENSAD).

⁴ <http://www.sadc.int/about-sadc/integration-milestones/free-trade-area>

⁵ Angola, the Democratic Republic of Congo (DRC) and Seychelles have not yet ratified the Protocol, although the two countries are signatories to the agreement (Sandrey, 2013).

regional imports⁶, leading to increased trade among member states after 2008 (Sandrey, 2013; Greenberg, 2016). Even so, intra-regional fish trade largely remains low due to technical and non-technical barriers. In addition, intra-regional fish trade is poorly documented. In order to evade the barriers that exist in the formal channels, traders prefer informal channels of trade (WorldFish Center, 2013; WWF, 2014; Tall, 2015).

While there have been efforts to increase access to staple cereals – the so called ‘calorie fundamentalism’ (Headey et al., 2012; Thow et al., 2016) – limited attention has been given to improving the availability and access to fish and fish-based products in Africa, despite the recognition that fish is a rich source of micro-nutrients (WorldFish Center, 2009; AUC-NEPAD, 2014). Improved intra-regional trade in fish and fishery products could play a major role in terms of creating employment, generating income, economic growth and development, as well as providing food and nutrition security. This paper uses fish as a lens for looking at the dynamics of (formal and informal) trade and investment and how these (directly or indirectly) influence and impact on food and nutrition security, using South Africa (the largest economy and fish trader in the region) and the SADC as the area of focus.

2. METHODOLOGY

The paper is based on results of semi-structured interviews conducted with key informants in South Africa (mainly in Cape Town, Pretoria and Johannesburg) and some African Union and SADC officials between June and November 2016. The informants were representatives of: the private sector in the food industry; government ministries and departments concerned with food and nutrition security and investment; private consultants working in the food industry; civil society interest group associations/organisations; fish retailers and traders specialising in importation and retailing of fish and other food products, in the Cape Town, Pretoria and Johannesburg metropolises; officials of AU organisations and RECs; and academics and researchers working in the food industry. Purposive selection of interviewees and snowballing were used as sampling strategies in identifying and targeting the people to interview. In total, 18 interview sessions were conducted with 32 people. Where necessary, secondary information has been used to substantiate our findings or provide alternative views.

3. FINDINGS, DISCUSSION AND CONCLUSIONS

3.1 Drivers of imports and exports

South Africa is the largest importer and exporter of fish and fish products in the SADC. In the past, imports into South Africa tended to be mainly high-value products, but in the last three to four years imports of low-value fish and fish products have increased. This is mainly because investors are finding it cheaper and economically efficient to bring in imports to meet the shortfall in local production (for example, sardines – *Sardinops sagax* – also referred to as pilchards⁷), and also an increased supply is needed to meet the needs of new markets or demands (for example, Chinese tilapia are in demand from the African migrant market, living in South Africa). Local sardine catches

⁶ <http://www.sadc.int/themes/economic-development/trade/trade-liberalisation>

⁷ The term used depends on region or country. For example, in the United Kingdom, ‘sardine’ refers to a young pilchard. In South Africa, pilchards (not sardines) are VAT exempt, which means that it matters what name processors use, in order to qualify for this exemption.

have declined dramatically in recent years, due to what are thought to be environmental factors (Watermeyer et al., 2016; Blamey et al., 2015; van der Lingen, 2011), making imports vital to meet the shortfall. Given that 70% of consumed seafood in South Africa is pilchard (WWF, 2014) and also that two-thirds of the South African canned pilchard is exported to other African countries (Hutchings et al., 2014), import substitution of raw pilchard by local canning companies has been absolutely necessary to meet both national and regional demand.

The growing importation of Chinese frozen tilapia into the SADC region (and Africa in general) at prices that wild and farmed tilapia cannot compete with⁸ points to the phenomenal growth in aquaculture production in China and Asia at much lower production costs, while the development of aquaculture in subSaharan Africa continues to struggle⁹. At the same time, increasing volumes of processed fish products of different varieties and species from various African countries have been imported into South Africa, targeting migrants living in the country (Jimu, forthcoming; Ndofor Epo, forthcoming). These come in all forms, including fresh, frozen, sun-dried, smoke-dried and salted-dried, and canned.

Regional agreements on removal of tariff and non-tariff barriers are drivers of increased trade within the SADC region, for example, agreements under the Southern Africa Customs Union (SACU) (SACU, 2002) and the SADC Protocol on Free Trade (SADC, 1996). In this context, it is cheaper and easier for South African companies to export within SACU and the SADC. Equally, it should be easier for other SACU and SADC member states to export to South Africa. Despite such regional agreements, member states can, and do introduce restrictions¹⁰. For example, Zimbabwe banned the importation of basic commodities in June 2016 as part of measures to protect the local industry and reduce its growing import bill and trade deficit¹¹.

South Africa also introduced import restrictions on mussels (*Mytilus galloprovincialis*) as part of measures to protect its young mussel farming industry (Hara et al., unpublished). In such cases, consumers could be disadvantaged, as a result of restriction on or denial of possible cheaper imported food.

Removal of trade barriers could also be at a cost to local consumers and detrimental to food and nutrition security if the exports result in national reduction of affordable fish and fish products. In order to evade tariffs or benefit from tariff reduction agreements, some South African companies are moving production to other countries. For example, companies obtain fishing rights in Namibia, and process and export the fish caught under such rights, in order to benefit from Namibia's preferential trade agreement for exporting to the United Kingdom under the Lomé Convention.

⁸ <http://www.fao.org/in-action/globefish/market-reports/resource-detail/en/c/336939/>;

<http://www.businessdailyafrica.com/Tilapia-imports-amount-to-sabotage/539546-3281754>

⁹ Some of the underlying factors for poor and slow growth and development of aquaculture in Africa have been identified as: unsuitable environmental and biophysical conditions; shortage of seed supplies; low levels of knowledge and skills; negative attitudes and behaviour towards aquaculture; weak organisation and governance; poor participatory approach; and unclear terms of agreement for business partnerships between communities and external players (Ateweberhan et al., 2013).

¹⁰ Under the SADC Protocol on Free Trade (SADC, 1996) MSs can introduce import restrictions as part of anti-dumping or/and countervailing measures.

¹¹ In June 2016, the government of Zimbabwe banned the import of basic commodities under 'Statutory Instrument 64 of 2016' as part of measures to reduce its trade deficit and growing import bill (<http://www.myzimbabwe.co.zw/news>).

3.2 Distribution channels and networks

Key to distribution of food in South Africa and the SADC are the informal channels and networks. It is estimated that less than 45% of food products go through formal retail outlets in South Africa, while in most SADC countries, the formal retail sector is estimated to be not larger than 5% (Njiwa, 2013). In this context, the informal economy contributes an estimated average of 43% to the GDP of African states (Afrika and Ajumbo, 2012). This also relates the findings that in Africa most of the cross-border trade is undertaken by the informal sector, and hence referred to as informal cross-border trade (ICBT)¹².

It is estimated that over 70% of the informal cross-border traders in the SADC region are women (Afrika and Ajumbo, 2012; Njiwa, 2013). In addition to seeking to evade taxes or fees imposed by governments, traders try to avoid administrative formalities in relation to areas such as health, import of agricultural products, and security and immigration, which are perceived as costly, complex and time consuming (Jimu, forthcoming)¹³. Large volumes of fish are transported into and out of South Africa, using passenger buses, as part of passenger accompanied goods. Some fish comes into the country on trucks coming to collect goods at the Durban and Cape Town ports, while some from West Africa comes through container ships to Durban Port (Ndofor Epo, forthcoming; Jimu, forthcoming). Zimbabwe's recent ban on imports of basic commodities has resulted in the establishment of informal and unofficial border crossing points for both imports and exports between Zimbabwe and its neighbours (ibid).

As a marketing strategy, producers can either choose a trade channel and try to dominate it, or they can serve all possible and available channels (both formal and informal). Given the size and importance of the informal sector in African economies, most producers of fish products in South Africa and the SADC choose the latter strategy. As a result, the market penetration of canned pilchard is second only to Coca Cola.

The informal channels require a diverse range of product sizes, which usually involves re-packaging. In most African countries, food is generally sold in open air markets. Fish is usually not even packaged; it is either sold as single individually priced fish (for big species) or in mounds (for small fish), without weighing. Similarly, most fish products in specialised shops for African food in South Africa's metropolises are sold unpacked, by piece, with only small species, such as kapenta (*Limnothrissa moidon*) and usipa (*Engraulicypris sardella*) sold in packets of R10, R20, R50, etc.

The dilemma that faces regulatory inspectors is whether formalisation would result in improved delivery and quality of food for consumers, or disenfranchise the small-scale trading sector by increasing prices of fish and fish products.

¹² This generally refers to 'trade in processed or non-processed merchandise which may be legal imports or exports on one side of the border and illicit on the other side and vice-versa, on account of not having been subjected to statutory border formalities such as customs clearance' (Afrika and Ajumbo, 2012: 1). ICBT involves bypassing border posts, concealment of goods, under-reporting, false classification, under-invoicing and other similar illicit practices and activities.

¹³ As a result, there is a lack of verifiable figures in terms of the size of this sector and the volume of food commodities that pass through the ICBT in the SADC (Jimu, forthcoming) and in Africa at large (Lesser and Moisé-Leema, 2009).

3.3 Employment and food security benefits of importation

The importation of raw material for local processing can have a positive impact on job and food security. For example, due to a decline in productivity and, therefore, reduced availability of sardines in South African waters, the South African pilchard canning sector imports raw (frozen) fish for processing. Until about three years ago, most South African canners used to outsource pilchard canning to Thailand and China. Tin plate for the can contributes 40% of the cost of canning fish, and cans in SA were 30% more expensive than in other countries. In addition, labour and energy were more expensive. But, due to the weakening of the rand, it became cheaper to can locally. Thus, whereas pilchard fishing and processing, based on local production, used to be seasonal, the importation of raw product for local canning has made it possible to run canning factories throughout the year, thereby increasing job security for the factory workers (now factories only close for about one month a year for maintenance).

3.4 Do economies of scale facilitate availability and affordability of food?

A few large conglomerates dominate the food-manufacturing environment in South Africa, including fishing and fish processing. This structural dynamic is a historical legacy, based on favourable industrial policy and funding incentives under apartheid through the Industrial Development Corporation (Mondi and Bardien, unpublished). For example, the establishment of a South African owned industrial fishing sector in the 1940s and 1950s was facilitated by government through soft loans and grant investments in a few fishing companies (Van Sirtett, 2003; Nielsen and Hara, 2006). As a result, South African canned pilchard has experienced significant growth and market penetration since establishment of the canning industry (pilchard constitutes 70% of all sea food consumed by South Africans, and two thirds of South Africa's canned pilchard is exported, mainly to other African countries).

The sector is dominated by a few large share-based companies. One of these is now the largest fishing company in Africa, the largest pilchard canning company in the world and among the top ten fishing companies in the world. The company has a market capitalisation of around R1 billion and employs 5,000 people (a fifth of the total employment in South Africa's commercial fishing industry). Its iconic and flagship pilchard brand has 80% market share of South Africa's canned pilchard market. The dominance of the brand is such that it is the fifth top brand (out of all consumer brands, not just fish) in South Africa.

Interviewees from some of the large food companies argued that by trying to break up or taking fishing rights away from these oligopolies, as part of transformation of the sector and Broad-Based Black Economic Empowerment¹⁴, government would grossly underestimate big companies' contribution to food and nutrition security. They argued that, if government were to break up the large companies, this would decrease their functionality and capability to deliver affordable food, which only the large companies can ably do, based on 'economies of scale'. In this context, the fish canning industry argues that pilchards are a 'marginal business' (where you need economies of scale to

¹⁴ Following the end of apartheid in 1994, one of South African government's key objectives has been transformation of the economy (DPME, 2016), mainly through Broad-Based Black Economic Empowerment (BBBEE). In the fishing sector, this has meant offering fishing rights to blacks and their inclusion in ownership of the existing fishing companies (Nielsen and Hara, 2006; Isaacs and Hara, 2008).

bring onto the market a marginally priced product, including through the importation of the raw pilchard for canning, as the case is currently), and small-scale operators would not survive. The question is whether such monopolies result in lack of competition and therefore disadvantage consumers in terms of higher fish prices.

3.5 Investing in African countries

The question about price and affordability of food also relates to whether it would be cheaper for local consumers if external food companies invested in and established fisheries-based industries in the local economies. For example, Irvin and Johnson (the largest hake company in South Africa) has a Zimbabwe-based bream (*Oreochromis niloticus*) cage farming company (Lake Harvest) on Lake Kariba. A second example is that a number of South African fishing companies have fishing rights in Namibian fisheries. Most of the big food companies are share-based and the key concern for investors is 'return on investment' and the potential for growth of their investments. In this context, a company's contribution to food and nutrition security, both locally and regionally, are secondary concerns for investors. Some of the interviewees from the private sector expressed the view that food security and nutrition are (or should be) byproducts of economic growth. The question is, therefore, whether the food industry can reconcile consumers' health and nutrition needs with profit motives.

According to interviewees, the main obstacles that South African companies experience regarding foreign investment, especially in other African countries, are related to a number of key issues:

- i. protection of investment (for example, Zimbabwe passed the Indigenisation and Economic Empowerment Act in 2007, which requires all externally owned companies to cede at least 51% of shares to black Zimbabweans, a policy that the government has been vigorously talking about, if not actually implementing);
- ii. repatriation of investment revenue and profits (an interviewee gave an example of a lucrative market for horse mackerel in Angola, which was operationally difficult to continue with, due to problems of shortage of foreign exchange and also laws governing repatriation of revenue and profits);
- iii. the need for a good business partner in the other country; and
- iv. the need for an efficient 'route to market'.

These challenges are similar to those cited by Meacham et al. (2012), who noted that the five most significant challenges regarding African markets were; underdeveloped infrastructure, disorganised and fragmented retail landscape, lack of reliable market research, unclear and ever-changing government regulations, and a severely limited talent pipeline. Interviewees pointed out that it would be easier to expand into other SADC and African countries if there were clear, agreed and enforceable fiscal regulations and processes, which is usually not the case. Thus one interviewee stated that, given that his was a large, listed company with impeccable corporate governance principles, his company was not keen on moving or establishing subsidiary operations in countries with unclear or questionable investment policies and protocols, and that it would be best to wait until good regional and national practices had been developed and implemented before investing outside the country.

Unstable currencies in most African countries was identified as another main risk factor when entering such markets. Other interviewees mentioned the growing problem of competition with counterfeit products, due to poor border controls and poor enforcement of standards and labelling. The issue of counterfeit fish products can be seen in the growing labels of pilchards in countries in the SADC region that do not have pilchard fisheries nor canning companies (for example, *Mapeto* packed for a company in Malawi, *Royal Ocean* packed for a company in Zimbabwe, etc.), and pilchard and mackerel labels imported from Pakistan, Singapore, Morocco, Japan, etc. into South Africa and SADC countries.

3.6 Product standards and labelling

South African fish product standards are arguably the highest in the SADC region. These, and those being used as basis for developing regional SADC food standards (SADCSTAN and WorldFish, 2016), are based on the Codex Alimentarius International¹⁵ Food Standards system. One of the issues that most South African companies have to deal with is whether they should be producing products with different specifications for other markets/countries that require lower standards (and thus reduce production costs), presumably in order to compete on these markets. The problem of producing products with different specifications for different markets/countries is the risk of 'round tripping'¹⁶. There could also be a need to do thorough market research and possibly product development for new markets, if developing products with different specifications was the route chosen; in effect adding to costs for entering into new markets. In addition, new markets provide unique challenges for additional branding and marketing. For example, after exporting to East Africa, one South African food company discovered that a culture of consuming canned foods is lacking in East Africa, despite the growing trend globally towards convenience foods.

Labelling is a particular challenge especially with import and exports. Some of the main issues around labelling are language (e.g. requirements for French and Portuguese in French- and Portuguese-speaking African countries), and/or different labelling requirements. The challenge with differentiated labels is in managing stock flows (how many of which label/for which country/for local or export).

In reality, what is currently happening is that South African supermarkets and fast food chains are cropping up everywhere in the SADC and Africa in general, taking with them South African standards, since most do not run separate product lines for South Africa and other countries. Thus, South African regulations and standards are effectively being exported and imposed on other countries; whether good or bad.

Traders that import processed fish into South Africa also pointed out that one of the problems at the borders was that the South African customs declaration form does not have the product codes for most of the specific species and types/forms of fish products that are increasingly being imported into the country, as these were not import items when the form was designed. This was stated as one of the main reasons some of these products are not recorded or are recorded under the wrong codes.

¹⁵ This system was developed and established by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) in 1963 for setting global standards on food. This system of standards aims to protect consumers, especially regarding food safety, and harmonise food standards, labelling and contents (additives, preservatives, etc.). The nutrient reference values under the system are a particular requirement for globally traded food.

¹⁶ Lower standard goods meant for a specific market ending up back on the South African market.

Municipalities are supposed to monitor specific food standards and levels of hygiene for food premises (processing plants, retail shops, restaurants, etc.), equipment and food handling. These are set by the South African Bureau of Standards and the National Regulator for Compulsory Specifications. Thus, all food processors and retailers are required to have an annually renewable certificate that gives them permission to process and sell food in a given municipal area. In addition, municipalities are supposed to have inspectors who should routinely conduct impromptu spot checks and inspections of food processing and retailing premises in their metropolitan areas. The specialised migrant food shops in South African metropolitan areas are also required to have such certificates from municipalities. The observed open, unpackaged display of fish, where buyers touch and choose fish without hand hygiene (gloves), and the unhygienic conditions in which some of the shops usually are, calls into question whether health standards are being enforced.

4. IMPLICATIONS FOR FOOD AND NUTRITION SECURITY

What are the implications for food and nutrition security for: import substitution; imports to meet local shortfalls/availability; regional trade agreements that remove trade barriers; protectionist measures for local production/industry; monopolies and economies of scale; foreign investment; types and forms of food distribution; and standards and labelling?

While national food producers, processors and retailers (especially small-scale) ought to be nurtured and protected from unfair competition (for example, dumping and cheap imports) in order to promote food self-sufficiency and sovereignty, this must not result in inefficient food sectors, ultimately working against food availability and affordability, and thus jeopardising food and nutrition security. Thus, the selection of which sectors to protect, how to protect these and for how long should be carefully analysed, implemented and monitored. As soon as such measures are no longer necessary or beneficial for the consumers, they should be suspended or removed. For example, it makes sense to protect South Africa's young mussel farming industry from cheap imports, while it would not make sense to introduce such measures for tilapia, as South Africa does not have tilapia from its capture fisheries, nor does the country have a tilapia aquaculture industry. How long the current measures protecting the mussel industry should stay in place needs to be balanced against whether such measures continue to be beneficial to the consumers. Whether South Africa and the SADC should introduce restrictions on imports of tilapia should be determined by whether and when this becomes necessary, for example, if the country and the regional community invest in commercial tilapia farming.

Import substitution meant to bring in cheaper products, while exporting the more valuable local products, as is being practised with regard to hake and squid, is beneficial to South African consumers; assuming that this makes available a cheaper product while earning the country foreign revenue. Similarly, the import of sardines (the most affordable and thus most popular fish among South African consumers) to meet shortfalls in national production has positive benefits for food and nutrition security, especially for those in the low-income bracket who consume large amounts of pilchard (WWF , 2014; Isaacs, 2016). In addition, this also has positive benefits for regional consumers in African countries that import two-thirds of the pilchard processed by South African canners. In Southern Africa, imported tilapia, which usually sells at prices

below locally produced freshwater and/or aquaculture tilapia species, is beneficial to consumers, both in terms of increased availability of a popular fish whose per capita supply has been declining and also affordability of the product. While self-sufficiency in food and food sovereignty are usually policy priorities of most developing nations, such as those in the SADC, import substitution of cheaper products and imports to meet national/local shortfalls in production ought to be acceptable options where supply and availability factors leave a state or region no other feasible option for meeting and ensuring food and nutrition security.

The issue of whether to produce locally or process to add value locally are business decisions that are usually beyond governments. For industry, such decisions are based on whether local production is more economically efficient than importing. Similarly, decisions about whether to add value locally or export a product in its raw form will depend on whether this would result in increased efficiency and profitability. It also depends on what form consumers want the product. In South Africa, almost all sardines for human consumption are canned. When it has been necessary to import sardines, they have been imported whole by South African canners, and, until about three years ago, most of the canning was outsourced to Asia, where the material, energy and labour were cheaper.

Concerning fish products being imported into South Africa for the migrant market, decisions on product form are mainly based on the mode of transport (buses, trucks and container ships) and the need to preserve the product as long as possible. Thus, dried and smoke-dried products are best. Also, most fish is consumed in this form, even in the originating countries. Ultimately, decisions about whether to produce locally or import, whether to add value or not, whether to outsource processing and what product form to produce involve reconciling the needs of investors, business managers and consumers.

The SADC Protocol on Free Trade (SADC, 1996) resulted in tariff reductions for most products traded among member states that have signed and ratified the Protocol. This benefits consumers in terms of price reduction in goods and also increased flow of food among member states in the SADC region, in effect having positive benefits for food and nutrition security. Regional trade could also be helping to get prices right in situations where having only local production is not economically efficient. For example, the impact of imported frozen Chinese tilapia on prices of tilapia in the SADC and African countries could be having a positive impact on the price of regional/national tilapia for consumers, even though this could be at the cost of promoting self-sufficiency and food sovereignty. In this context, global trade has been credited for reduction in food prices (WTO, 2014), which benefits low-income consumers by helping them to access cheaper imported food. Such agreements are also supposed to result in easier and quicker border processes, as there should be less incentive for use of informal channels and practices. Overall, regional trade agreements enhance and promote intra-regional trade.

At the same time, contexts whereby member states unilaterally introduce protectionist barriers call into question whether trade agreements, such as the SADC Protocol on Free Trade can be strictly enforced among member states. The fact that states can still introduce bans and restrictions unilaterally, like Zimbabwe did, raises concerns as to how enforceable such protocols and agreements really are and what measures could be put in place in order to ensure that all states abide by the protocols and agreements. Also, member states need to consider the impact of such unilateral protectionist measures on the food and nutrition security of local consumers.

Regional measures should include harmonisation of general and sanitary and phytosanitary standards. The fact that a lot of people who conduct cross-border trade are small-scale traders and women also calls for introduction of flexible exemptions for this category of trader from some of the measures, regulations and restrictions. Such flexibility is likely to have positive benefits for food security and livelihoods of the small-scale producers and small-scale traders and many others in these food value chains.

Informal distribution channels appear to work best in most of SADC, including South Africa. Even with growing penetration of supermarkets into rural towns and trading centres in South Africa, the majority of people still rely heavily on informal retail outlets. Measures to support these should be introduced, with flexible regulations in terms of hygiene and health, storage, preservation, display and other factors. Since, these are the channels and outlets that ensure that food reaches most people in an acceptable state, form and price, even standards and labelling for both local and imported food should be based on flexible regulations that promote improved and efficient delivery of nutritious human food.

5. CONCLUSION

International trade is driven by import substitution, shortfalls in local production or unavailability of the type and quality of food demanded by consumers. This study revealed that large volumes of imported sardines are an important source of raw material for South Africa's canning industry. This is creating stable jobs in South Africa, as well as supplying other SADC states with valuable fish protein. Another factor is the price competitiveness of locally produced food, compared to imports. Thus, it might be more profitable for investors to export locally produced products to more lucrative export markets and then import cheaper products for the local market. Examples here are the locally produced hake and squid, which are exported to Europe and, in turn, cheaper imports are brought in, helping South Africa to generate foreign exchange, while at the same time providing these fish products at affordable prices.

In theory, investing in production infrastructure in local markets by commercial food producers could be the most efficient way for the route to market. However, export of products using ready established production capacity in the exporting country is usually the preferred route. Such decisions are partly influenced by the difficulties of establishing a presence in another country, prevailing global/regional/national economic conditions and the fiscal regulations of the potential country for which investment is destined. Most South African food producers thus prefer the export route to meet the demand of consumers in new external markets.

Informal international fish trade is a result of the structure of the economies in most SADC countries, which largely depend on small-scale traders, rather than large-scale formal multi-chain supermarkets. For this reason, informal trade is likely to remain the main channel for the foreseeable future in South Africa and the SADC. Informal trade, including cross-border, helps deliver food to most people's plates and, therefore, greatly contributes towards food and nutrition security. In the SADC region, women form an important component of cross-border trade, especially informal trade. Given the role that women play in ensuring that their families and households have food, trade-based livelihoods are important in contributing to household food security. Therefore,

improving how women and small-scale traders transact economically both nationally and through cross-border trade, without diminishing their effectiveness, ought to be an important aspect of regional trade agreements. One way could be to exempt small-scale traders from most of the import/export regulatory requirements and introduce flexible processes and controls (for example, through one-stop border posts, such as the one introduced at Chirundu border post between Zambia and Zimbabwe), apart from those concerning food safety, and sanitary and phytosanitary issues.

Structural and institutional weaknesses and inefficiencies at most South African and other SADC member state borders result in traders having low confidence in formal border systems, thereby encouraging and reinforcing informal systems and channels. This represents loss of revenue for states, and loss of data captured through documenting and recording the volumes and product forms of imports and exports.

Agreed regional standards for importing and exporting fish and fish products is another area in need of urgent attention and resolution. Given the traditional and cultural differences and habits that food represents to consumers, this is a difficult aspect of regional and multi-lateral trade agreements; however it is necessary to resolve it. Improving border infrastructure, processes and institutions and developing common principles for minimum quality and standards through shared understanding and agreements could greatly increase traders' confidence in formal border systems and enhance the contribution of cross-border trade to food and nutrition security.

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