Routledge
Taylor & Francis Group

Agrekon

Agricultural Economics Research, Policy and Practice in Southern Africa

ISSN: 0303-1853 (Print) 2078-0400 (Online) Journal homepage: http://www.tandfonline.com/loi/ragr20

Non-Tariff Measures Affecting Agricultural Trade in SADC

M. Kalaba, J. Kirsten & T. Sacolo

To cite this article: M. Kalaba, J. Kirsten & T. Sacolo (2016) Non-Tariff Measures Affecting Agricultural Trade in SADC, Agrekon, 55:4, 377-410, DOI: 10.1080/03031853.2016.1243059

To link to this article: http://dx.doi.org/10.1080/03031853.2016.1243059

NON-TARIFF MEASURES AFFECTING AGRICULTURAL TRADE IN SADC

M. Kalaba
Department of Agricultural Economics, Extension and Rural Development, University of Pretoria
Mmatlou.kalaba@up.ac.za

T. Sacolo
Department of Agricultural Economics, Extension and Rural Development, University of Pretoria
sacolo.sacolo72@gmail.com

J. Kirsten
Department of Africultural Economics, Extension and Rural Development, University of Pretoria
johann.kirsten@up.ac.za

ABSTRACT

The establishment of the World Trade Organization in 1995 and the subsequent proliferation of regional and bilateral trade agreements resulted in the decline of global tariffs. However, other trade and regulatory measures have increased and thus restricted potential trade to some extent. These measures, non-tariff measures (NTMs), have also affected intra-SADC trade as there was no evidence of growth in the trade that needed to accompany the decline in tariffs. The extent of the impact of NTMs on SADC trade is still not fully understood due to lack of such data, which has effectively affected the quality of research in this area. In this article, data on NTMs related to SADC agricultural products for ten countries was compiled to shed some light on these measures, as well as to make them transparent. The results confirm that these countries have increased their use of NTMs over the period 2000 to 2010. As a result, on average one product was subjected to 17 NTMs in 2010. The Southern African Customs Union is the leader in the use of NTMs, while Malawi had the least incidences of NTMs. Most of the NTMs are applied on fruits, meat, dairy, vegetables and cereal products. The use of sanitary and phytosanitary measures (SPS) and of export measures was increasing faster than other categories were. Finally, there is an indication that NTMs are used as substitutes for the declining tariffs. NTMs are trade restricting, and if they are not addressed, they will continue to reverse the gains of the SADC free trade area, as well as other initiatives of trade liberalisation.

Keywords: non-tariff measures, agricultural products, SADC trade

JEL classification: F150 and Q170

UNISA university of south africa
Routledge Taylor & Francis Group

Agrekon
Volume 55 | Number 4 | 2016
pp. 377–410

DOI: 10.1080/03031853.2016.1243059
Print ISSN 0303-1853 | Online 2078-0400

1. INTRODUCTION

Global tariff protection has been negotiated downwards through many rounds of World Trade Organization (WTO) negotiations, regional integration initiatives and bilateral agreements (WTO, 2008). However, other policies have increasingly provided restrictions to international trade. These policy measures are generally referred to as non-tariff measures (NTMs). NTMs are defined as any measures other than tariffs that distort trade. They pose a different and difficult problem, relative to tariffs. Similarly to tariffs, NTMs restrict or distort trade, affect domestic prices and impact on welfare. At the same time, these measures are used for necessary and legitimate policy goals, such as food safety and to protect animal health. However, unlike tariffs, some NTMs are unquantifiable, sometimes unobservable until they are applied, and many of them are usually not transparent (Martinez, Mora and Signoret, 2009).

The challenges relating to NTMs do not necessarily comprise a new phenomenon. While the policy challenge has remained the same as in the early General Agreements on Tariffs and Trade (GATT), the specific issues, debates and solutions have evolved over time (WTO, 2012). In the past, NTMs were often driven, or influenced in terms of design, by producer interests. The focus was on national measures, and on ensuring that the WTO principles of non-discrimination and transparency are upheld. This was done while avoiding protectionism.

Recently, NTMs have reflected a greater diversity in public policy concerns, including consumer interests (UNCTAD, 2012a). There is a growing focus on transnational measures, as well as on encouraging regulatory cooperation, mutual recognition agreements and the international harmonisation of standards. Within these challenges, there are still data problems concerning NTMs, which are highly fragmented as they affect various aspects of the product flow; they can be applied for an unlimited number of reasons (for example economic, health, trade, religious, political, and many others); and unlike tariffs, they can be introduced by any agency or institution. In addition, there are problems related to the application of NTMs due to administrators that are not trained necessarily to deal with such issues (Cadot and Malouche, 2012). This increases the opaqueness of NTMs and escalates their effects.

These challenges affect developed and developing countries differently, and differ from one trade arrangement to another, and from country to country. It is well-known that developing countries are affected more by NTMs due to lack of resources required to implement their own measures or to comply with requirements elsewhere (Cadot and Gourdon, 2012). This article presents the NTMs applied by the Southern African Development Community (SADC) countries on agricultural products. The same NTMs applied by the SADC countries are faced by the member states when trading with one another.

The SADC process towards trade liberalisation started in 1996 with the signing of the protocol on trade. Article six of the SADC trade protocol indicates that NTMs

will be removed over the implementation period (SADC, 2004). Trade liberalisation will be considered attained when 85 % of trade within the SADC region takes place free of customs duties and a free trade area (FTA) has been established. The protocol was implemented from the year 2000 when it was ratified by eleven members[1] by following the WTO's special differential treatment (SDT) approach. This differentiation was applied on both products and members. Members were divided into developed countries (Southern African Customs Union(SACU), consisting of Botswana, Lesotho, Namibia, South Africa and Swaziland), developing countries (Mauritius and Zimbabwe) and least developing countries (Malawi, Mozambique, Tanzania and Zambia). Developed countries were required to front-load the tariff phase down and to reduce most of their tariffs within five years. Mauritius and Zimbabwe had up to years six and seven to reduce most of their tariffs, while the least developed countries had up to year eight to reduce up to 85 % of their tariffs to zero.

Product differentiation involved dividing products into three groups. Group A were products that were to be bound to zero at the beginning of the implementation period. Group B included products that were to be phased down to zero trade over a period of eight years. Finally, Group C constituted an exclusion list of products from the tariff phase down. Most countries decided to protect their agricultural sectors by including the majority of their sectors' products on this exclusion list.

The agriculture sector has major social and economic importance in the SADC region. The sector contributes between 3 % and 27 % of GDP and approximately 13 % of overall export earnings (SADC Secretariat, 2012). About 70 % of the region's population depends on agriculture for food, income and employment. Hence, the performance of this sector has a strong influence on food security, economic growth and social stability in the region. The way in which the subject of NTMs is addressed in the region will be of high importance in these sectoral contributions and goals achieved.

The effects of NTMs on trade are ambiguous (UNCTAD, 2010). For example, compliance with regulatory measures may lead to higher costs, which will eventually be passed through to consumers. As a result, the high costs may restrict market access for exporters. These may also provide protection to the domestic producers of the same good. However, higher regulatory requirements may raise consumer confidence in the quality of imported goods. As a result, such confidence may lead to high demand for the same imported good.

This study presents a descriptive compilation of the NTMs affecting agricultural products within SADC countries from 2000 to 2010. It uses the classification of the Multi-Agency Support Team (MAST) to categorise NTMs in the region (UNCTAD, 2010). The first objective is to provide the first effort in collecting NTM data that will

1 SADC members that ratified the trade protocol are Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

shed some light on the prevalence and pervasiveness of NTMs. The second objective is to provide transparency in this area of trade policy. This is important for enabling governments and policy makers to understand the importance of addressing NTMs as part of domestic competitiveness and regulatory reforms.

The rest of the article is structured as follows: the next section gives the brief review of intra-SADC trade over the past decade. This is then followed in Section 3 with definitions of NTMs. In section 4, SADC NTMs and their influence on agricultural trade are discussed. They are discussed in terms of the method of compilation and sources, country applying NTMs, products affected by NTMs as well as types of NTMs used. The final section provides concluding remarks and further work that needs to be done.

2. SHARE OF SADC TRADE

SADC began implementing the protocol on trade in the latter half of the year 2000 (SADC Secretariat, 2004). This was after the protocol was signed in 1996. The significance of the implementation was the reduction of customs tariffs. The formula for tariff reduction was agreed upon, prior to the implementation of the protocol. The formula provided that developed countries of SACU were to reduce the majority of the tariffs in the early years and to complete this reduction within five years. The developing countries, Mauritius and Zimbabwe, were to reduce at a medium pace. Countries classified as least developed were allowed more time, of up to eight years, to implement the protocol on trade.[2]

This was the first step taken towards trade liberalisation in the region. It was intended to result in greater trade between member states. The overall aim was to improve trade performance between the member states relative to non-SADC members. The SADC trade performance is assessed using two basic measures of trade performance.

First, a share of intra-SADC agriculture imports over the years is compared with agriculture imports from non-SADC members. Definition of agricultural products follows the WTO product coverage in terms of the harmonised systems (HS) (WTO, 1995), HS 1 through to 24, excluding fisheries (HS 3). Other products included are raw hides and skin, leather and fur skin products (HS 41–43), and finally wool, cotton and textile fibre products (HS 51–53). It is expected that intra-SADC imports will be starting at low base, hence the initiative to improve the situation through the tariff reduction. This is mainly because tariffs constitute a cost of trade, and thus any reduction of this cost should lead to improvement in trade. If intra-SADC trade is

2 Other SADC members were not part of the trade protocol or had not acceded to the regional bloc. Angola and the DRC had not ratified the protocol on trade at this stage, while Seychelles and Madagascar acceded later.

improving, then over the period, intra-SADC imports should be getting close to non-SADC imports. The long-term objective is to surpass it.

Then, an evaluation of this intra-SADC trade objective is done using growth rate of intra-SADC imports relative to that of non-SADC members. Imports refer to those of the agricultural products as explained earlier. The assessment uses nominal import values from 2000 to 2010. Furthermore, trade is broken down into two halves to observe whether there was any change over the 11-year period. If intra-SADC trade was improving, then the growth of intra-SADC imports should be higher than that of non-SADC imports. Table 1 shows SADC trade in value, as well as growth rates, over the eleven-year period.

Table 1: Comparison of intra-SADC and non-SADC agricultural imports (US$ and growth rates)

	US $ billion		**Growth (%)**	
Year	**intra-SADC**	**non-SADC**	**intra-SADC**	**non-SADC**
2000	**1.39**	**2.79**	-	**-**
2001	**1.48**	**2.68**	6%	-4%
2002	**2.08**	**3.03**	41%	13%
2003	**2.21**	**3.84**	7%	27%
2004	**3.00**	**4.95**	35%	29%
2005	**2.46**	**4.97**	-18%	0%
2006	**2.37**	**6.11**	-4%	23%
2007	**2.74**	**7.91**	16%	29%
2008	**3.16**	**8.69**	15%	10%
2009	**3.79**	**7.64**	20%	-12%
2010	**3.68**	**8.74**	-3%	14%
Average 2000-10	**2.58**	**5.58**	**11%**	**13%**
Average 2000- 04	**2.03**	**3.46**	**22%**	**13%**
Average 2005- 10	**3.03**	**7.34**	**4%**	**11%**

Source: Calculations from UN COMTRADE Database, 2012

The results of growth assessment are summarised at the bottom part of Table 1. The average value of intra-SADC imports per year over the whole period was US$2.58bn, while imports from non-SADC were more than double the intra-SADC value (US$5.58bn). On average, non-SADC imports were growing at a faster pace than intra-SADC imports were, that is an average of 13 % per annum, compared with 11 % of intra-SADC imports. When the period was split into two halves, intra-SADC imports grew faster between 2000 and 2004 (22 % per annum) compared with non-SADC imports (13 % per annum). This is over the period when only the SACU

reduced its tariffs as a result of frontloading its phase-down process. But in the latter years, when the SADC was actually reducing more tariffs and getting closer to a free trade area, the growth was at a much slower pace of 4 % per annum. Therefore, SADC countries are still importing relatively more from non-SADC members, despite the incentives of low tariffs within the region. Then, overall, the performance of intra-SADC trade was low when compared with non-SADC trade.

The last method of assessment compares tariff reduction for agricultural products with intra-SADC import share. The assessment uses the relationship between tariffs and trade to evaluate performance. Since tariffs are trade costs, any reduction of costs should therefore lead to trade improvement. So, the performance will be considered to be improving if over this period the share of intra-SADC imports was growing as a result of a reduction of trade costs. Figure 1 below shows that agricultural tariffs (trade costs) declined from about an average of 15 % in 2000 to less than 5 % in 2010. The tariffs used were average simple tariffs, as they were to be on phase down, as required by the trade protocol implementation. However, the share of intra-SADC imports, which was expected to be increasing, had actually declined for most of the middle period. Initially, it rose from about 33 % to 40 % in 2002, but then started to decline. It started picking up in around 2008, but it was still at the levels of more than ten years previously. This is again another indication that SADC trade performance has not improved, despite protection in the form of tariffs being reduced.

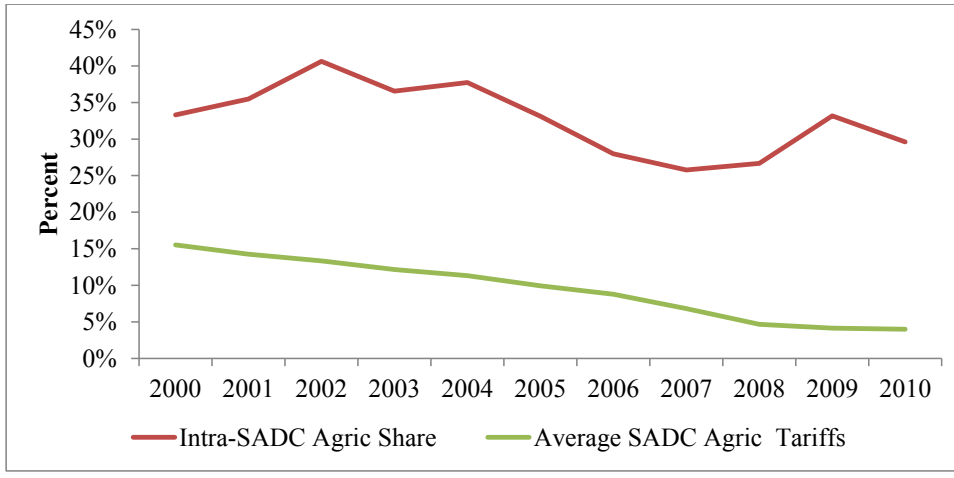

Figure 1: Intra-SADC import share of agriculture products and agricultural tariffs

Source: Calculated from UN COMTRADE Database and SADC Secretariat

The above results indicate that SADC trade performance has not improved in the last decade. The three measures that were used to assess this performance showed

consistent results of lower than expected trade performance. While there could be several reasons to explain this poor performance, some of those have to do with the NTMs identified by the World Bank (2012) to constitute some of the reasons for low intra-regional trade on the continent, such as high transaction costs, which drive trade costs up and subsequently limit trade. In this article, we are not testing whether or not NTMs are the causes of such low trade performance, and we endeavour rather to explain their use within the SADC. In the next section we discuss various definitions of NTMs.

3. DEFINITION OF NTMS AND CLASSIFICATIONS

NTMs are generally understood to refer to any measure that causes trade distortion, as long as it is not a tariff. Therefore the term is a residual category of measures and actions that restricts to various degrees and different ways the market access of goods (WTO, 2012). Thus, an NTM can be defined broadly as any measure that causes a trade distortion other than the tariffs (Carrere and De Melo, 2011). A distortion in trade exists when the domestic price differs from a border price. These distortions include export measures as well, such as bans and export subsidies. A distortion can also be introduced deliberately by governments, such as through a quantitative restriction. It may also be the outcome of an unintended objective, such as a regulatory action like a sanitary measure.

The *functional* definition of NTMs deals basically with economic effects. Baldwin (1970) describes them as "non-tariff distortions", and this refers to any measures, public or private, that cause internationally traded goods and services, or resources devoted to the production, of goods and services, to be allocated in such a way that potential real world income is reduced. Lloyd (1996) uses the same concept in the law of one price in the regional single market. He argues that NTMs are included together with other restrictions such as taxes, which effectively prevent the law of one price from being effectively implemented.

The *operational* definition of NTMs deals with the identification of the measures and provides the taxonomy of NTMs (UNCTAD, 2012a). This definition focuses on items that are included and excluded from the list of NTMs. Such a list may never be concluded because theoretically, any measure can have price-raising, trade-reducing, welfare-reducing and other economic effects. The approach of drawing such an inventory is very important as the list can be harmonised with an analytical perspective. Therefore, the analysis of the economic effects should depend on such an inventory of measures.

By definition, NTMs cover a broad array of regulations affecting traded products. The term "NTM" designates a vast range of heterogeneous regulatory instruments (Cadot and Gourdon, 2012). Within all the trade distortions applicable to trade, some are justifiable while others are not. When a distortion is introduced explicitly to

protect domestic industry by restricting import demand, then it is classified as a non-tariff barrier (NTB). NTBs may include internal measures such as production subsidies and many other administrative measures.

The key feature distinguishing NTBs from NTMs is that NTBs have protectionist intent. Some examples of NTBs include quotas, tariff-rate quotas, licensing regimes, import and export bans, and price bands. On the other hand, NTMs include all measures that distort trade. In many cases it is really difficult to separate NTMs from NTBs, as measures that may have been introduced to protect consumers from a known or perceived threat may remain after the threat has been removed.

Regarding classification of NTM information, there is a problem with data accessibility, that is, even in cases when data was available, it was not always available at the same place. NTM data is usually scattered and therefore not readily accessible. The United Nations Conference on Trade and Development (UNCTAD) and the Trade Analysis Information Systems (Trains) have developed one of the internationally accessible databases of NTMs (Bacchetta Richtering and Santana, 2012). The database was developed in 1988 and has coverage of about 100 countries. The classification uses the Trade Control Measures Coding System (TCMCS). It is divided into six main categories, namely, price control measures; finance measures; automatic licensing, quantity control measures; monopolistic competition and technical measures; production and export measures; and technical barriers.

The classification had two main weaknesses. The first one is that it excluded measures applied to exports and production. Following the functional definition of NTMs, the two measures should be part of the classification. Measures that are supportive of export and production distort trade and therefore should have been included in the classification. Secondly, by early 2000s, the database was outdated (Carrere and De Melo, 2009). The database was not maintained and updated regularly.

The classification was adjusted to include the intent to indicate the impact of the measures (Wolfe, 2003). Five different categories were identified, and this time covered restrictions as well as subsidies. The categories were:

- subsidies;
- measures dealing with volume of imports;
- measures dealing with the price of imported goods;
- monitoring measures (including price and volume investigations); and
- surveillance measures.

Although this classification was an improvement from the previous ones, it still included some arbitrariness and overlapping attributes in several categories. For example, most measures have price and quantity effects.

The shortcomings of the UNCTAD-Trains database (described above) resulted in UNCTAD considering other options to classify and capture NTMs. In 2006

UNCTAD established a body called the Group of Eminent Persons on Non-Tariff Barriers (GNTB). The terms of reference for the GNTB were broad with regard to the NTMs and the existing database. However, the significant one was for the team to "make recommendations on the issues of definition, classification and quantification of NTMs". The classification of NTMs that was produced constitutes a taxonomy of all those measures considered relevant in today's situation in international trade (UNCTAD, 2012b). It is based on the UNCTAD Coding System and was developed by several international organisations forming what was called the MAST group (Multi-Agency Support Team) to support the Group of Eminent Persons on NTBs established by the Secretary General of UNCTAD in 2006.

On the issue of the definition, it was clear that there is no commonly agreed definition of NTMs. Eventually, the GNTB decided to work with the definition of NTMs as "policy measures, other than tariffs, that can potentially have economic effect on international trade in goods, services, changing quantities traded, or prices or both". Using this definition, they classified NTMs according to a hierarchical tree structure where NTMs are disaggregated into 16 "branches" or chapters. These chapters were denoted by the letters of alphabet, A through to P. Each branch consists of "sub-branch" or 1-digit level, "twigs" or 2-digit level, and "leaves", also known as 3-digit level. Table 2 shows the structure of this classification at the "tier" 1 or chapter level.

In broad terms, NTM categories are classified into those that affect imports and that affect exports (Gourdon and Nicita, 2012). The classification does not judge the legitimacy, adequacy, necessity or discrimination of any form of policy intervention used in international trade. It acknowledges existence and is designed to organise information into a database format (UNCTAD, 2012b). So, categories A through to O are applied to imports. Import measures are further classified into technical and non-technical. Categories A and B, SPS and TBT measures are referred to as technical measures. These measures deal with the protection of human, animal and plant health, as well as related technical measures and standards. Categories C to O are non-technical. Non-technical measures cover a mixture of command-and-control types of measures (price controls, quantitative restrictions and prohibitions) and a disparate set of measures (Cadot and Gourdon, 2012).

Table 2: The MAST Hierarchical NTM Classification

Flow	Type	Code	NTM Description
IMPORTS	Technical	A	Sanitary and phytosanitary measures (SPS)
		B	Technical barriers to trade (TBT)
	Non- Technical	C	Pre-shipment inspection and other formalities
		D	Price control measures
		E	Licences, quotas, prohibitions and other quantity control measures
		F	Charges, taxes and other para-tariff measures
		G	Finance measures
		H	Anti-competitive measures
		I	Trade-related investment measures
		J	Distribution restrictions
		K	Restriction on post-sales services
		L	Subsidies (excluding export subsidies under P700)
		M	Government procurement restrictions
		N	Intellectual property
		O	Rules of origin (RoO)
EXPORTS		P	Export related measures

Source: MAST, 2009

Some of the non-technical measures, such as pre-shipment inspection (category C), are easy to monitor as they are applied irrespective of the product. They are also administrative in nature, as they are part of the daily routine carried out by custom officials. Category C deals with the classification of pre-shipment inspections and customs formalities (UNCTAD, 2012b). These measures can potentially affect all products. Others, such as taxes and para-tariff measures (category F), are also easier to track as they are often administered in a transparent way (Gourdon and Nicita, 2012). These measures are applied to finance border-management administrations. At times, their functions are not always clear (UNCTAD, 2012b).

Measures G to O relate to a process or service (Nicita, 2011). Unlike measures A and B, they are not always imposed on a product. For example, anti-competitive (category H) and distribution restrictions (J) can be observed only when the products are affected by the two processes. These NTMs deal with the internal distribution of imported products. Others measures are very difficult to code at the product level, such as Trade-Related Investment Measures (TRIMS) (I) or intellectual property

(N). Subsidies (L) are a particularly difficult case because of the definition that MAST (2009) used for financial contribution.[3]

Subsidies are often granted to certain companies or sectors and not to others, depending on their location, ownership status (ethnic minorities, special groups and so on), or type (SMEs). It is difficult to track all subsidies granted under the numerous schemes typically in place to serve various societal purposes. Even more difficult is to decide when they are sufficiently prevalent to be ascribed to a particular product.

Rules of origin are another category of non-tariff measure. They are required in preferential trade agreements to identify which countries are eligible for reduced or zero tariffs. However, they can be designed in a way that makes them costly to satisfy, which limits the impact of the trade preferences. Rules of origin are also necessary for applying protection measures such as anti-dumping and safeguard measures (UNCTAD, 2010). Thus, including them in the MAST nomenclature gives an appearance of exhaustivity, but is difficult to operationalise for quantitative work.

Lastly, export measures (category P) are of growing importance, particularly for foodstuffs in times of rising food prices. Gillson (2011) argues that export restrictions in times of high prices contribute to reducing incentives to expand production. This results in shortages that are not beneficial, both over time (because supply does not react) and across space (as producers in surplus regions are banned from arbitraging price differences). Accordingly, price spikes in deficit regions are not dampened by increased imports. Thus, export restrictions exert negative regional externalities and increase consumer price volatility.

Agricultural trade is largely affected by technical barriers, SPS and TBT measures. SPS are important as, by definition, these measures are related to food safety, and animal and plant health, and the environment (WTO, 2010b). Agriculture deals more with these issues, as compared with other sectors of the economy. As a result, it is expected that these measures will be more prevalent in agriculture than in other sectors. Other measures that are more applicable to the agricultural sector include export-related measures, that is, bans and taxes. Subsidies (L) and price control measures (F) in the SADC are also on the rise, as several countries have started providing input support to the farmers. Subsidies are also linked with the WTO's domestic support. Countries in the region were able to justify their support on the basis of being a least developed country, and on food imports and food security. The detailed discussions on how these measures are observed in SADC trade will be discussed in the next section.

3 Financial contribution by a government or government body to a production structure, being a particular industry or company, such as direct or potential transfer of funds (e.g., grants, loans, equity infusions), payments to a funding mechanism and income or price support.

4. SADC NTMS AND THEIR INFLUENCE ON AGRICULTURE TRADE

4.1 Introduction

This section discusses the NTMs in SADC, as compiled by the authors. It starts with the justification and identification of the gap in compiling the NTM data. The shortcomings in analysis in this area, as a result of the absence of or poor quality NTM data, are discussed under the literature. Next, the methods and procedures for compiling the database are discussed, followed by discussions of what arose from the database. These results are discussed in terms of total SADC NTMs over the ten-year period, by country and by products, as well as by the type of NTM using the MAST classification.

4.2 Previous studies on NTMs

Generally, the studies on NTMs rely on data from the Trains database or on business surveys, which are conducted with the companies involved in trade (OECD, 2001; Donnelly and Manifold, 2005; Martinez *et al.*, 2009). For work on the SADC, the Trains database was not applicable as it does not cover many countries in the region. The scarcity of NTM data in the SADC region limits the amount and quality of work that can be done in this area.

Mmasi and Ihiga (2007) have undertaken a survey of NTMs covering the East African Community (EAC), SADC and COMESA. Their scope of work was limited to interviews with stakeholders and border officials. Other studies and surveys of NTMs in SADC countries were done by the WTO (2012), Charalambides and Gillson (2011), and Mthembu-Salter (2007), as well as by institutions such as Imani (2007), TIPS (2007) and SAIIA (2007). The survey work by Imani (2007) covered eleven SADC countries. In that survey, the authors relied mostly on the respondents' information and their knowledge of the existence of NTMs.

The results of the Mmasi and Ihiga (2007) study constituted mainly an identification of what was observed during the survey as being key NTMs. The analysis of the consultancy work seemed to be focused on some aspects of NTMs, for example SPS, and not on all of them. Furthermore, the survey work did not compile an audit of the NTMs, except for the efforts of Trademark Southern Africa (2011). The sparse availability of data limited the research work in the identification or analysis based on frequencies and coverage ratios. The frequency ratio identifies products affected by NTMs, and the coverage ratio estimates the share or value of imports affected by NTMs. However, these measures do not deal with the severity of NTMs or separate NTMs imposed by exporter from importer. Analysis based on this information will not adequately address some of the main concerns about NTMs or

lead to informative policy making that seeks to address such challenges. To address NTMs decisively and for policy decisions to be implemented, it is necessary to know the role and impact of each individual NTM on specific products, as well as the country imposing the NTMs.

Trademark Southern Africa started a process of recording NTMs at the border posts within the SADC, EAC and COMESA (Trademark Southern Africa, 2011). The reporting of complaints is done by the traders or truckers as they experience challenges, and the matter is recorded to be taken further with the affected countries. There is also information on the notifications such as SPS and TBT to the WTO and fellow SADC partners (WTO, 2005; International Trade Centre (ITC), 2003). There is transparency in the process as all the information is made available online, together with contact details for every responsible institution in the countries, in case follow-ups are necessary.

The work of Trademark Southern Africa is, however, not sufficient to explain what has really happened in the previous years. Furthermore, its focus is narrow as it hardly includes issues beyond the border. In other words, it barely scratches the surface in terms of what is happening with the NTMs. The classification of NTMs used has only eight categories, compared with the MAST classification, which has sixteen chapters and where each individual chapter is divided into groupings with depths of up to three levels. The eight categories include the following:

- Government participation in trade and restrictive practices tolerated by governments;
- Customs and administrative entry procedures;
- Technical barriers to trade (TBT);
- Sanitary and phytosanitary (SPS) measures;
- Specific limitations;
- Charges on imports;
- Other procedural problems; and
- Transport, Clearing and Forwarding.

One key shortcoming of this reporting system is that it totally excludes NTMs, which are imposed by exporters (export taxes, bans, subsidies, and other measures imposed on their products). Furthermore, the categories are too broad and therefore do not necessarily indicate the specific product affected. For example, some of the barriers reported on by the Trademark Southern Africa portal include information, such as refusal to accept certain certificates or delays at border posts, without indicating the affected products. Another weakness of the reporting system is that it does not include factors such as regulatory measures, state trading and licensing requirements

because they are not necessarily part of what is happening at the border. However, these are part of NTMs. Therefore, the portal does not cover these measures, yet they do affect trade flows.

In order to address such shortcomings and gaps, this article provides detailed information on NTMs in SADC over an 11-year period. Furthermore, the data is classified into the MAST taxonomy. The information was collected from gazetted documents of the governments of the seven SADC countries in this study, other survey reports, WTO notifications and policy briefs. Interviews were held with various government officials and institutions involved in trade, trade regulation and trade negotiations. There were also visits made to some of the SADC border posts to observe what happens at the border when some of the consignments arrive, how they are handled, how long it takes to process the documents, and other administrative issues of relevance.

The result is a database of NTMs in SADC by country, according to the MAST taxonomy. The database shows incidences of NTMs by country and by product. The database is a work in progress as it needs to be updated regularly. The NTMs are evolving and adapting over time, and therefore an NTM database should follow suit.

4.3 Compiling SADC NTMs and sources

The database was compiled with information from several sources. These sources can broadly be categorised into three groups, namely, WTO, government and research reports. The WTO documents used include the notifications to the WTO, such as SPS, TBT, schedules of concessions or commitment, trade policy reviews, monitoring reports and dispute reports. Government reports include policy documents, items of legislation and other gazetted information. Research reports cover information gathered from private institutions, from unpublished and published research in journals, and from consultants, non-governmental organisations and others. This also includes the information that was gathered in the interviews with government officials in several SADC countries. All information, particularly from interviews and private research, was checked and confirmed with authorities and through other official documents to make sure that what was included was not just opinions. Then, the database was developed following the MAST classification.

The MAST classification was greatly useful in simplifying data collected. Given that all known NTMs have categories within this classification, it becomes easier to compile it. In all SADC countries for which data was gathered, none had a single repository of NTM information. Furthermore, laws and regulations affecting trade are enacted by different government agencies. Figure 2 provides a summary of the process followed in building the SADC NTM database.

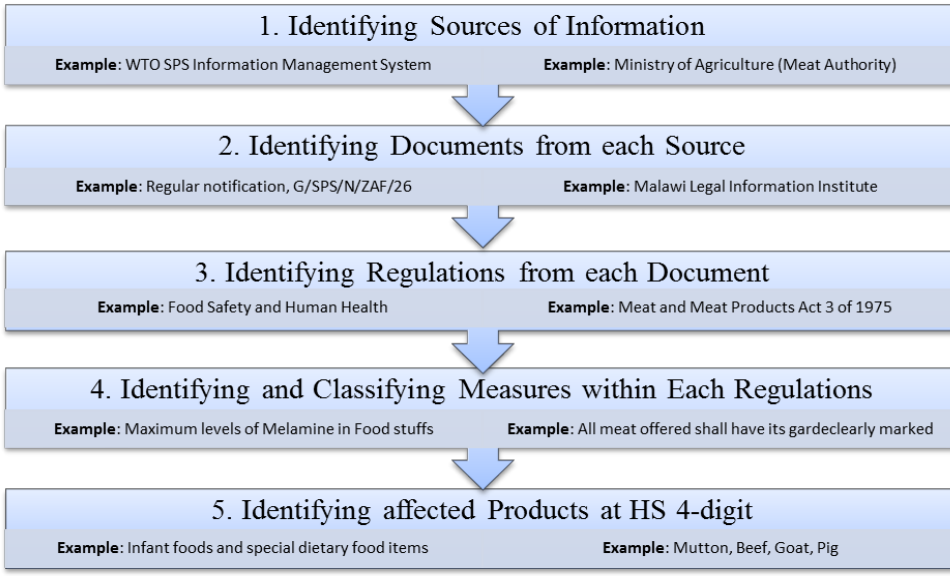

Figure 2: Process of compiling SADC NTM data

Most of the data was compiled through documentation gathering. In the *first* step, sources of information were identified from various government agencies and institutions. The sources of data varied, depending on the country. In many countries, information is published online. Some countries publish information on the official government website, others on the parliament websites. Some of the documents were gathered from the regional Secretariats, that is, the SACU Secretariat in the case of SACU countries, the SADC Secretariat, COMESA, EAC, and Indian Ocean Community (IOC). The WTO SPS management system was helpful in obtaining those regulations that had been already notified.

Next, documents that contain regulatory measures, such as Acts, government gazettes and other government regulations, were collected in step *two*. An inventory of the documents on trade regulations was also compiled to continue the process of database building. Trade and other regulations affecting trade are published in various documents and websites. Some regulations are published in one or several documents. For example, the agency responsible for trade promotion would publish the regulations, and the government department responsible would do the same. Some examples of the document titles include the *Import and Export Control Act*, *Tobacco Act*, *Food Act*, and *Animal and Disease Control Act*. The WTO policy documents have notification numbers, which make it easy to find them on the WTO database of documents.

In the *third* step, regulations arising from such documents were identified. One document may contain several regulations. All regulations identified were recorded.

Then, in that way, NTMs were matched with the products. In some instances, a regulation may be called a law, in others an Act, and sometimes an ordinance, directive, an order, notification or a decree. Attempts were made to identify all such regulations. This included having to look at additional and separate documents to verify whether what is deemed to be a regulation, indeed applied as such.

In the *fourth* step, those regulations were then classified into various categories. Once all measures within each regulation were identified, the process of classifying them then started. This implied that each regulation needed to be clearly read to find the corresponding NTM code. Some of the regulations were clearly straightforward, but others presented great challenges in deciding which NTM code each belonged to. For example, the codes for most measures on export (category P) and rules of origin (category O) were fairly easy to find, as there are very few of those categories. In some cases, a regulation may fit into two categories. For example, the labelling requirement for food products does fit as an SPS requirement (A31), as well as a TBT (B31). The same thing applies to marking – A33 or B33. In such cases, one code was selected.

Lastly, the products affected were identified. The challenges come about where regulations are applied on a product that cannot be differentiated at HS 4-digit level. For example, some regulations will be applicable only to yellow or white maize. However, in the harmonised system (HS) nomenclature at HS 4-digit, the two are not distinguished from each other. In that case, the regulation will be coded on the product as if it applies to both.

The period covered for compilation of NTMs is 2000 to 2010. These NTMs were compiled for agricultural products only. The products included were those covered by the WTO definition of agricultural products, and were defined at HS 4-digit level. In total, NTMs on 247 products were compiled for ten SADC countries. These countries included the four SACU members, Malawi, Mauritius, Mozambique, Tanzania, Zambia and Zimbabwe.

4.4 SADC NTMs over time

Overall, more than 4 400 NTMs were identified in the agricultural sector for the SADC as at the end of the year 2010. However, the numbers of NTMs indicated in 2000 were not all introduced that year, but were an accumulation until the end of that year. Basically, all the years are accumulations, as NTMs are hardly ever reduced, with exception of temporary bans. Figure 3 shows that SADC NTMs on agricultural products in the year 2000 numbered just over 2000. This was an aggregation of all ten SADC countries included in the study. Furthermore, Figure 3 shows a steady upward sloping trend, indicating the growth in NTMs between the years 2000 and 2004. One year before the launch of SADC FTA, there were almost twice the numbers of NTMs as there were at the beginning of the trade protocol implementation. There were close to 4 000 NTM incidences in 2007. Then, another steady rise is observed

from 2008 to 2010, showing that even after the FTA was launched, SADC countries continued to add NTMs.

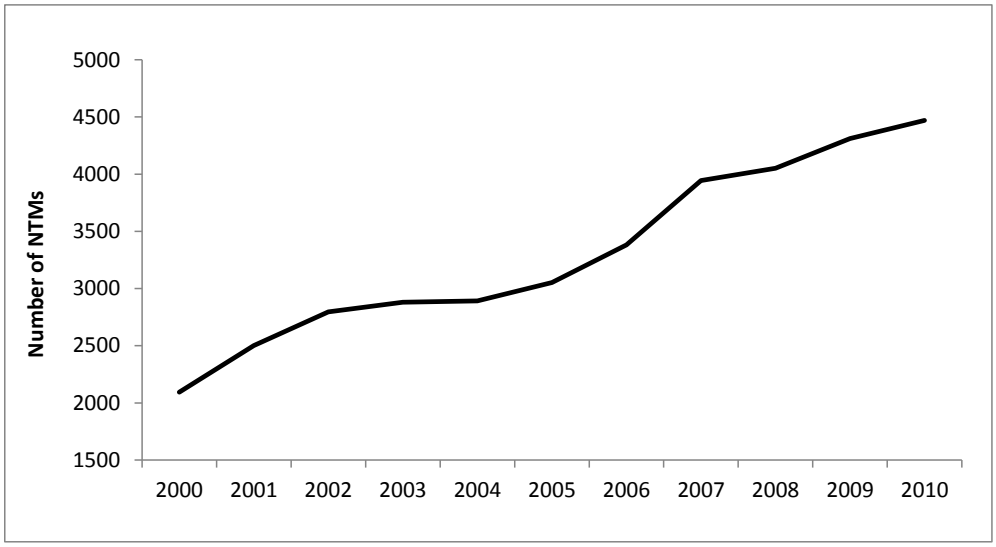

Figure 3: Aggregated SADC NTMs from 2000 to 2010

Source: NTM Database compiled by authors, 2012

The sharp rise of NTMs towards the year 2007 is associated with a response to the deadline of the launch of the SADC free trade area (FTA). The SADC FTA was launched in 2008, so it might have been that countries were waking up to the reality that tariffs needed to be reduced substantially between 2005 and 2008. More than two-thirds of SADC countries had back-loaded their phase-down schedules, so that at that time there were still many tariff lines to be reduced. That may have motivated those countries to increase their use of NTMs. Furthermore, this rise is linked to the eventual realisation that tariffs, as a means of protection, were no longer an option. This is further supported by the fact that some of the countries, such as Malawi, Tanzania and Zimbabwe, which were supposed to fully implement the SADC trade protocol and FTA, have not done so for various reasons (SADC, 2011). Furthermore, over this period a number of ad hoc policies were imposed, such as import bans, quantitative restrictions and other policy responses to the global economic crises around the same period (World Bank, 2012).

4.5 NTM by Country

As was explained in the previous section, the application of NTMs was on an upward trend after the year 2000. However, not all countries were increasing the NTMs at

the same rate. Figure 4 shows NTMs imposed by the ten SADC countries for the first year (2000) and the last year (2010) of the study period. This helps to provide a comparison of the positions the countries were in at the beginning, relative to 2010. It is evident that some countries started at very low levels of NTMs.

Figure 4 shows that six of the SADC countries had fewer than 200 NTMs on agricultural products. These were Malawi (MWI), Mauritius (MAU), Mozambique (MOZ), Tanzania (TAN), Zambia (ZMB) and Zimbabwe (ZWE). All these countries mid-loaded and back-loaded their tariff phase down schedule (SADC Secretariat, 2004). The remaining countries started at high levels of NTMs. They all had NTMs of 200 and higher in 2000. Coincidentally, all of them were SACU members. South Africa (ZAF) was a clear leader with more than 400 NTMs, followed by Swaziland (SWA), while Botswana (BWA) had the least NTMs among SACU countries, with 220.

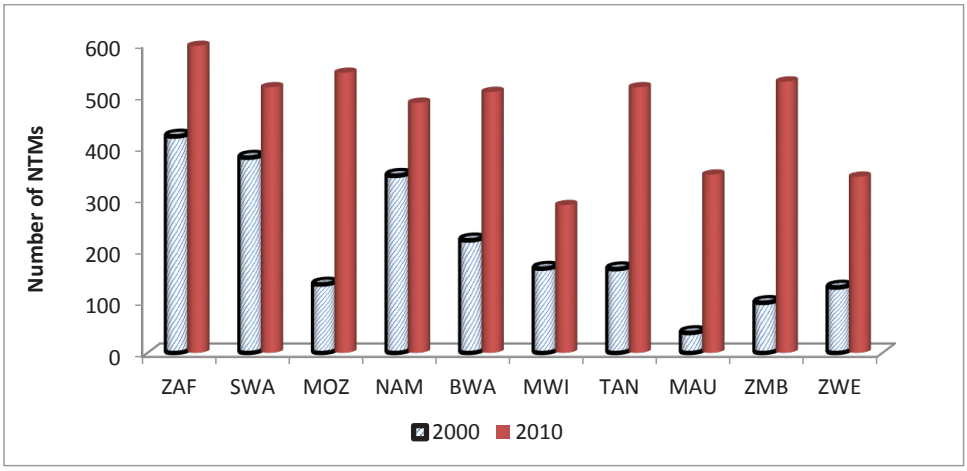

Figure 4: SADC NTMs by country for the years 2000 and 2010

Source: NTM Database compiled by authors, 2012

In 2010 South Africa was still the leader with close to 600 NTMs applied on the imports of agricultural products. Three categories contributed about 80% of these NTMs. SPS measures (category B) contributed 37%, then licensing, quantitative restrictions and other prohibitions (category E) accounted for 22%, and TBT measures (category A) added 18%. Most of these were on products such as beverages, spirits and vinegar (17%), fruits (15%), meat products (14%) and dairy products (13%). Five other countries had NTMs around the 500 mark, and these were Zambia, Tanzania, Botswana, Namibia and Swaziland. Malawi, Mauritius and Zimbabwe had relatively low NTMs in 2010, of around 300 and lower. Malawi is the

country that applied the least NTMs. By the 2010, it still had less than 300 NTMs, which was lower than what other countries had a decade previously.

SACU did not only start at high levels of NTMs, but it also increased the use of NTMs substantially over the period. NTMs are introduced at country level, and not all of them are motivated by trade policy. So, despite SACU having common trade policies, NTMs are not necessarily expected to be similar. The NTMs of SACU countries are attributed to the SACU Agreement of 2002 that established industrial policy (SACU, 2004). This led to introduction of measures such as the infant industry in as the dairy, beverages and meat subsectors (Charalambides and Ngwenya, 2011; Grynberg, 2011) in Swaziland, Botswana and Namibia.

This does not imply that other countries have not done anything to grow their NTM base. Most countries were still below SACU countries in 2010, mainly because they had started from a very low base. However, when one looks at the average growth of NTMs in all the countries, it becomes apparent that all countries had intentions to make use of more NTMs. Zambia was the fastest increasing country, with a growth of more 430% over the ten-year study period. This implies that, on average, Zambia was adding more than 43 NTMs that affect agricultural products. It was followed by Mozambique with an average of 41 new NTMs per year over the ten-year period, and then by Tanzania with 35. Malawi is also the least in terms of adding NTMs, with an average of 12 NTMs per year.

There is a noticeable relationship between the countries' uses of NTMs and tariff reduction. Firstly, of the countries front-loading the tariff phase down, SACU countries started at higher levels of NTMs than any other country did. Secondly, countries which were back-loading (Malawi, Mozambique, Tanzania and Zambia) and mid-loading (Mauritius and Zimbabwe) started increasing their NTMs at about the same time when major reductions were required to happen, that is, from 2005. Thirdly, the country that had the least NTMs in terms of numbers and growth, that is, Malawi, had not adjusted its tariff schedule since 2000 (Southern African Trade Hub, 2011). The implication is that, since there was no tariff adjustment, one can argue that they did not see the need to adjust NTMs. Overall, the pattern of NTM use is consistent with the tariff reduction, and therefore the two can be considered to be substitutes.

4.6 NTM by product

The NTM counts for products were aggregated at the HS 2-digit level for reporting. However, the database has a count at HS 4-digit. In the year 2000, four product groups at HS 2-digit had NTMs of around 200 in all SADC countries. These were dairy (cheese, milk, yoghurt and others), beverages (wine, alcohol and spirits), fruits, and meat products. These groups are followed by vegetables and cereals, with NTM

numbers of between 100 and 200. Figure 5 shows that the rest of the product groups had NTMs of less than 100 in the first year of the period of analysis.

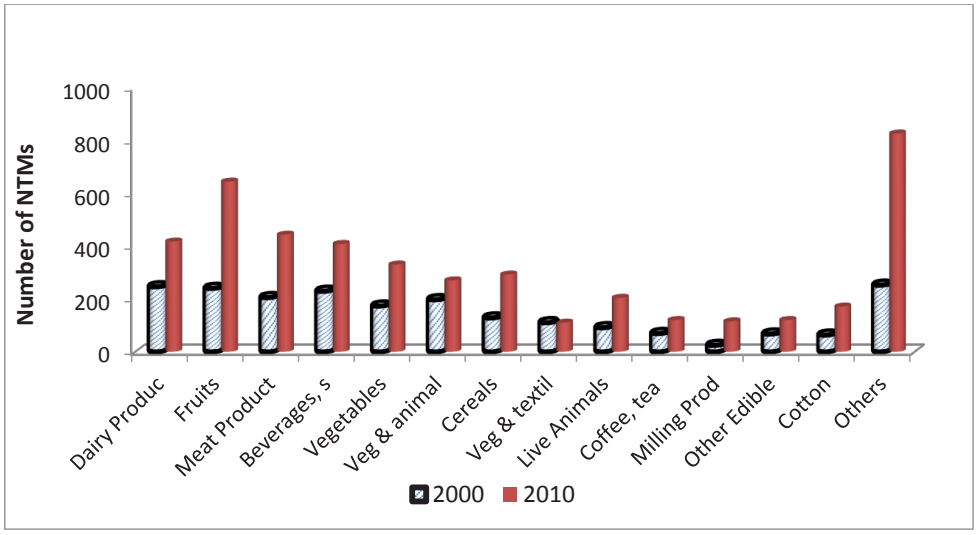

Figure 5: NTMs by Product groups for the years 2000 and 2010

Source: NTM Database compiled by authors, 2012

By the year 2010, fruits had taken over as the leading product group in terms of number of NTMs. By that time, the group had accumulated a total of more than 600 NTMs. The product groups following fruits, at a long distance, were dairy, beverages and meat products. They had accumulated about 400 NTMs. Cereals, vegetables and live animals were the third tier of product groups in terms of the use of NTMs.

In summary, all products had increased their NTMs. This is also reflected by the last category, "others", which is an aggregation of all products outside the top twelve product groups. The highest growth rates were in products such as cocoa and cocoa products, vegetable materials, animal skins and others. Like other products, in the year 2000, most of them had few NTMs, but then accelerated the use of NTMs over time.

Another way of looking at how NTMs have increased by product groups over the period is through evaluating the growth rates. Starting with those from a high base (of more than 200 NTMs in 2000), fruits were clearly the fastest growing group, with about 170% over the period. This implies that, on average, 40 NTMs were added on fruits by the SADC member countries per annum. Meat products had a growth of about 120%. Those products growing from a low base include tea, coffee and spices, as well as fats and oils of vegetables and animals (HS 15), both growing at a rate of more than 600% over the period. However, the fact that the far right bar of other products (an aggregation of products with fewer NTMs in 2000) increased substantially implies that almost all products have realised some increases in the use of NTMs.

In 2010 the total number of NTMs had grown to 4 470. Two of the top three had lost their share and only fruits maintained the same share as in 2000, and remained the leader. The share of both dairy and beverage products declined from 2000 to less than 10% in 2010. The shares of products such as meat and cereals have not changed. Fats of vegetables and animal oils tripled their share of NTMs over the decade. All products appear to maintain about the same share for both periods, except in the case of fruits, vegetables and animal fats.

4.7 NTM by category

The use of NTMs by category shows that SPS measures were preferred in 2000. Figure 6 depicts that out of all 2094 NTMs which were compiled in the 10 SADC countries in 2000, 485 were SPS measures. This represented more than one-fifth of all NTM categories. They are followed by the SADC rules of origin; licensing, quotas and bans; and export measures. The use of rules of origin and export measures is really a concern for regional integration. This is mainly because they are supposed to facilitate intra-regional trade. The fact that their use is so prevalent, yet SADC trade has not improved, implies that they may be serving the opposite of what the SADC aims to achieve in terms of regional integration.

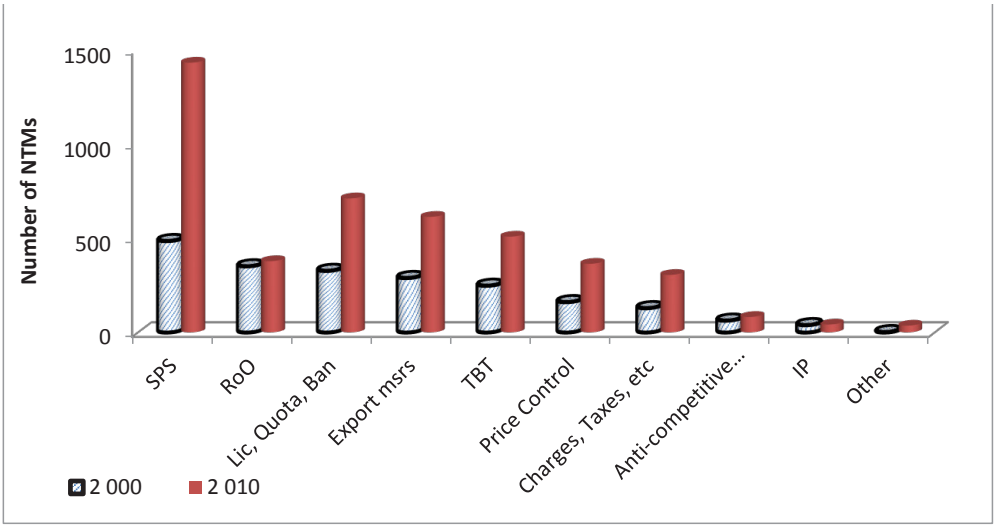

Figure 6: SADC NTMs by category

Source: NTM Database compiled by authors, 2012

Figure 6 shows that SADC countries consolidated their use of SPS measures over the period. By the year 2010, SPS measures had increased from less than one-quarter of all NTMs used to more than one-third. Licensing, quotas and bans increased, and export measures increased substantially. Rules of origin have not increased in numbers, mainly because the SADC only changed once over the period, in 2007 (Southern African Trade Hub, 2011). That adjustment has not changed the rules substantially.

4.8 Nature of SPS measures applied in SADC

The application of SPS measures was expected to dominate most NTMs due to three reasons. First, these are regulations for food safety, animal and plant health protection (WTO, 2010a; Martinez *et al*., 2009). Therefore, they are expected to be in the majority for agricultural products. The second reason has to do with the fact that their use is allowed by the WTO, as long as it can be justified. Thirdly, when these measures are applied, they tend to be accompanied by other procedural requirements, which add another layer of measures (WTO, 2012). An example of the procedures is that they may require that if an importer introduces a measure, and in order for the supplier to comply with the measure, the exporter may be required to do inspections, ensure traceability, labelling and packing.

Half of the 1 400 SPS measures applied in the SADC are accounted for by five sub-categories, out of a total of 30 sub-categories. About 20% of applied SPS in the SADC are classified as *systems approach* (Sub-category A130). Figure 7

below shows the number of the SPS sub-categories as applied by SADC members. This sub-category, SPS, is applied in a combination of one or two independent SPS measures. For example, to check whether an exporter complies with the requirement, both inspection and testing may need to be done. Some measures may include pre-harvest and post-harvest treatments.

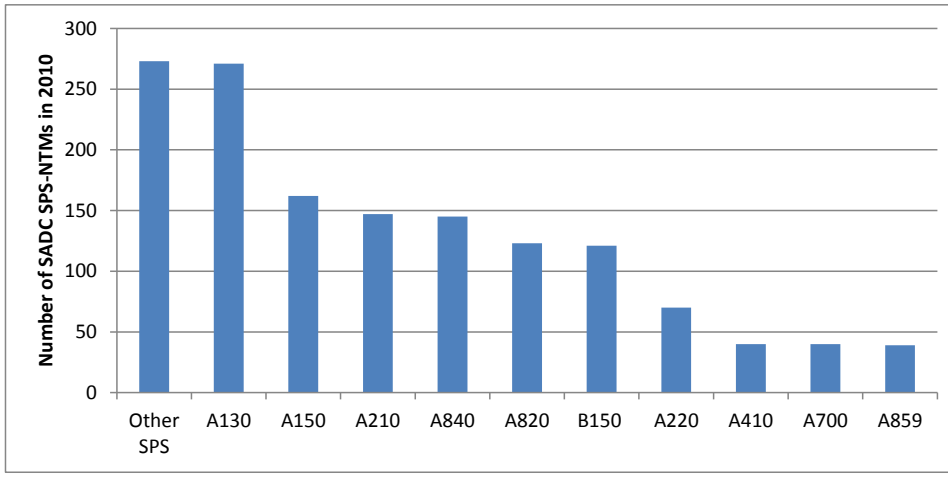

Figure 7: Breakdown of SPS measures applied by SADC countries, 2010

Source: NTM Database compiled by authors, 2012

Registration requirements (Sub-category A150) by importers account for 11% of all SPS measures in the SADC. This applies to importers of products affected by identified SPS measures. In the registration process, importers may have to comply with certain requirements, provide certain documents, and even pay a certain amount in registration fees. Registration may also be required at multiple institutions, that is, the Ministries of Health, Agriculture, Trade and Industry, or agencies of such Ministries.

Tolerance limits for residues (sub-category A210) and *inspection requirements* (sub-category A840) account for 10% of SPS measures, each. UNCTAD (2010) defines tolerance limits for residues as a measure that establishes a maximum residue limit (MRL) or "tolerance limit" of substances in foods and feed, which are used during their production process, but are not their intended ingredients. Requirements for product inspection in the importing country may be performed by public or private entities. In some cases, it may be similar to testing, but does not include laboratory testing. The other half of SPS measures are contributed by 25 other sub-categories of NTMs.

In summary, the use of SPS measures is linked with the fact that WTO rules allow them. As long as they do meet the requirements, then members can apply

them, and as long as they are also notified to the WTO. Rules of origin and export measures are worrying, as they seem to be contradicting the objectives of the SADC. They are supposed to help promote regional trade, but there is no evidence of such an outcome. However, the fact that the share of rules of origin had declined by half in 2010 may be an encouraging sign, that if many NTMs are sanctioned by regional institutions, then they may start declining, or only those that are necessary will be introduced.

5. CONCLUSION

The trade policy challenges that are accompanied by the use of NTMs keep increasing. This phenomenon is observable at global, regional and national levels. These challenges intensify as tariffs are being reduced. The problem is that some of the NTMs are not transparent, and therefore it is difficult for trading partners to comply with or prepare for them. This is also aggravated by the fact that some of the measures used are legitimate, while others are used purely to reduce competition from foreign products. This adds to the complications of NTMs. The aim of this paper was to shed some light on the NTMs used on SADC agricultural products.

SADC trade of agricultural products was shown to be performing poorly. The value on intra-SADC imports, when compared with those from non-SADC members, appeared to be lagging behind. The growth rates of the two sources of imports also showed that non-SADC imports, overall, were growing at a faster rate. When intra-SADC import share was compared with the rate of tariff reduction, once again there was indication that the SADC share of imports has not improved as had been expected. Therefore, tariff reduction did not result in high intra-SADC trade performance. Other factors, such as NTMs, may have had a role to play in this lack of response from SADC trade, such as lack of productivity or competitiveness. Accordingly, the role and use of NTMs in SADC needed to be clearly understood.

The compiled information confirms that, indeed, the use of NTMs on agricultural products in the SADC had increased between the years 2000 and 2010. Ten SADC countries had an aggregate of about 2000 NTMs in 2000, and by 2010, that number had more than doubled. This implies that at least 230 NTMs were introduced per year. Furthermore, it means that, on average, each of the 250 agricultural products (at HS 4-digit level) faced about 17 NTMs in 2010.

The breakdown of SADC NTMs by country reveals that SACU members have more NTMs in place, and that they also started with a very high number in 2000. This has to do with the fact that, in terms of the SADC tariff phase-down, SACU needed to start their tariff phase-down earlier than all countries did. The rest started their phase-down three to five years later. There is also an inverse relationship between tariff phase-down and the increase of NTMs. This seems to be supported by the fact

that when non-SACU countries needed to cut their tariffs, there was evidence of increasing NTMs among those countries. Another observation is that Malawi, which has the least NTMs, did not adjust the tariff schedule according to the SADC phase-down requirements, and therefore did not see the need to increase NTMs.

High incidences of SACU NTMs are consistent with the use of such measures around the world (Nicita, 2011). Developed countries with highly diverse economies tend to have high incidences of NTMs. This is because such measures are applied for different products. Within the SADC, SACU was classified as a developed group during the implementation of the trade protocol. Furthermore, SACU's implementation of industrial policy meant that some of these measures were needed to provide some protection for priority sectors (Charalambides and Ngwenya, 2011).

The use of NTMs by product was high for dairy, meat, beverages and fruit product groups in 2000. By 2010, fruits had experienced a greater application of NTMs, relative to the rest of agricultural products. Besides fruit, all products generally faced more NTMs, relative to 2000. However, the use of NTMs by category shows that, mainly, SPS measures were the most used. This was for the year 2000, and they continued to rise over the next decade. The rationale behind this is that they are allowable by the WTO, as long as they can be justified. Rules of origin and export measures were very high in 2000; however, there was no real change in the number of rules of origin, and eventually they declined in percentage terms.

The NTMs, legitimate or not, have potential to restrict trade. Their application needs to be monitored and understood so that trading partners can comply. However, if there is no transparency in their use, and they remain ad hoc in application, then they are likely to reverse the gains made in trade liberalisation and other negotiations. For the SADC, measures applied on exports and in rules of origin are worryingly high and may be destructive to regional integration goals. One of the key recommendations is that there should be a clear inventory of, and publication of, the NTMs when they are introduced. This will promote transparency around these measures.

One encouraging factor is that the rules of origin were adjusted only once and that has led to their decline in percentage terms. The reason behind that is that they cannot be unilaterally applied, but they must be sanctioned by the regional secretariats. Therefore, harmonisation of the NTM measures should follow a similar route used for the rules of origin. Furthermore, countries need to invest in the human resources that deal with the recording, evaluation and implementation of NTMs. This is even more relevant to SPS measures which need to be supported by scientific evidence before they are applied. Accordingly, further investment in education, research and development is very important. Finally, NTMs are trade policy measures and they will continue to be discussion points. There is a need to continue working on them, and identifying, quantifying and adjusting policies to promote trade in the region.

REFERENCES

Bacchetta, M., Richtering, J. and Santana, R. 2012. How much Light do WTO Notifications shed on NTMs?. In Cadot, O. and Malouche, M. (eds.), *Non-tariff measures: A fresh look at trade policy's new frontier*. Washington, D.C. and London: World Bank and Centre for Economic Policy Research.

Baldwin, R. E. 1970. *Nontariff distortions in international trade*. Washington, D.C.: The Brookings Institution.

Cadot, O. and Gourdon, J. 2012. *Assessing the price-raising effects of non-tariff measures. CEP II Working Paper No 2012 – 16*. Paris.

Cadot, O. and Malouche, M. (eds.), *Non-tariff measures: A fresh look at trade policy's new frontier*. Washington, D.C. and London: World Bank and Centre for Economic Policy Research.

Cadot, O., Malouche, M. and Saez, S. 2012. Streamlining non tariff measures. A toolkit for policy makers. Washington: World Bank ISBN: 978-0-8213-9510-3.

Charalambides, N. and Gillson, N. 2011. Addressing Non-Tariff Barriers on Regional Trade in Southern Africa. In O. Cadot and M. Malouche (eds.), Non-tariff measures: A fresh look at trade policy's new frontier. Washington, D.C. and London: World Bank/CEPR.

Charalambides, N. and Ngwenya, K. 2011. *Achieving balanced industrial development within a regional setting: Challenges and pitfalls*. Gaborone, Botswana: Imani Development.

Carrer, C. and De Melo, J. 2011. Notes on detecting the effects of non tariff measures. *Journal of Economics Integration* 26(1): 136–168.

Donnelly, W. A. and Manifold, D. 2005. *A compilation of reported non-tariff measures: Description of the information. Working Paper 2005-05-A*. Washington, D.C.: US International Trade Commission, Office of Economics.

Gillson, I. 2011. *Non-tariff barriers to sub-Saharan African trade in food staples: Opening regional markets to promote food security and price stabilisation*. Washington: World Bank.

Gourdon, J. and Nicita, A. 2012. Non-tariff measures: Evidence from recent data collection. In Cadot, O. and Malouche, M. (eds.), *Non-tariff measures – A fresh look at trade policy's new frontier*. London and Washington, DC: Centre for Economic Policy Research/World Bank.

Grynberg, R. 2011. The price of poultry and beef. Discussion Paper. Gaborone, Botswana: Botswana Institute of Development Policy Analysis.

Imani Development. 2007. 2007 Survey of non tariff barriers to trade, July 2007. Available at www.imanidevelopment.com.

International Trade Centre (ITC). 2003. *Business guide to the world trading system*. Second Edition. Geneva, Switzerland: International Trade Centre, UNCTAD/WTO.

Lloyd, P. 1996. The changing nature of RTAs. In B. Bora and C. Findlay (eds.), *Regional integration and Asia Pacific*. Melbourne: Oxford Press.

Martinez, A., Mora, J. and Signoret, J. E. 2009. *The core NTMs database: A compilation of reported non-tariff measures. Working Paper 2009-12A*. Washington, D.C.: US International Trade Commission, Office of Economics.

Mmasi, J. and Ihiga, S. 2007. A survey of non-tariff barriers that affect Tanzanian imports and exports within EAC, SADC and COMESA countries. http://ntb.africonnect.com/media/tanzania.pdf (accessed May 2012).

Mthembu-Salter, G. 2007. *The cost of non-tariff barriers to business along the north-south corridor (South Africa-Zimbabwe) via Beit Bridge – A preliminary study. Trade Policy Report No 20*. Johannesburg, South Africa: South African Institute of International Affairs.

Multi Agency Support Team (MAST). 2009. Report to the Group of Eminent Persons on Non-Tariff Barriers. Presented at the Group's meeting of 5 November 2009, Geneva.

Nicita, A. 2011. What information about NTMs do we have and what are we missing? Paper presented at the EAAE Conference in Zurich, September 2011.

Nicita, A. and Gourdon, J. 2012. *A preliminary analysis on newly collected data on non-tariff measures*. Geneva: UNCTAD/ITCD/TAB/54.

Organisation for Economic Cooperation and Development (OECD). 2001. *Measurement of sanitary, phytosanitary and technical barriers to trade*. Paris: OECD.

South African Institute of International Affairs (SAIIA). 2007. *Non-tariff barriers in Southern Africa – Towards a Measurement Approach*. Johannesburg: SAIIA.

Southern African Customs Union (SACU). 2004. *The 2002 Southern African Customs Union (SACU) Agreement*. Windhoek, Namibia: SACU.

Southern African Development Community (SADC). 2004. *SADC Protocol on Trade*. Gaborone, Botswana: SADC.

Southern African Development Community (SADC). 2011. *Desk assessment of the Regional Indicative Strategic Development Plan 2005–2010*. Gaborone, Botswana: SADC.

Southern African Development Community (SADC). 2012. *SADC towards a common future*. Gaborone, Botswana: SADC.

Southern African Trade Hub (SATH). 2011. *Technical report: 2011 Audit of implementation of the SADC protocol on trade*. Gaborone, Botswana: SATH.

Trade and industrial Policy Strategies (TIPS). 2007. *Non tariff barriers in SADC. Trade Performance Review 2007*. Pretoria: TIPS.

TradeMark Southern Africa. 2011. *TradeMark Southern Africa (TMSA), Briefing Information*. Pretoria: TMSA.

United Nations Commodity Trade Statistics Database (UN Comtrade). 2012. *Trade Statistics accessed via World Integrated Trade Solutions (WITS)*. New York: UN Comtrade New York.

United Nations Conference on Trade and Development (UNCTAD). 2010. *Non-tariff measures: Evidence from selected developing countries and future research agenda. Developing countries in international trade studies*. Geneva, Switzerland: UNCTAD.

United Nations Conference on Trade and Development (UNCTAD). 2012a. *Non-tariff measures to trade: Economic and policy issues of developing countries*. Geneva: United Nations Conference on Trade and Development.

United Nations Conference on Trade and Development (UNCTAD). 2012b. *International classification of non-tariff measures*. Geneva: United Nations Conference on Trade and Development.

Wolfe, R. 2003. Regulatory transparency, developing countries and the World Trade Organisation (WTO). *World Trade Review* 2(2): 157–182.

World Bank. 2012. *De-fragmenting Africa: Deepening regional trade integration in goods and services*. Washington, DC: World Bank.

World Trade Organisation (WTO). 1995. *Agriculture – Explanation of the Agreement. Annex 1 of the Agreement, Product Coverage*. Geneva: The World Trade Organisation.

World Trade Organisation (WTO). 2005 *World Trade Report, 2005. Trade, Standards and the World Trade Organisation (WTO)*. Geneva: World Trade Organisation.

World Trade Organisation (WTO) 2008. *World Trade Report, 2008. Trade in a Globalising World.* Geneva, Switzerland: World Trade Organisation.

World Trade Organisation (WTO). 2010a. *World Tariffs Profile 2006 – 2010*. Geneva, Switzerland: World Trade Organisation.

World Trade Organisation (WTO). 2010b. *World Trade Organisation agreements series. sanitary and phytosanitary measures*. ISSN 1020-4768. Geneva, Switzerland: World Trade Organisation. ISSN 1020-4768.

World Trade Organisation (WTO). 2012. *World Trade Report 2012. Trade and Public Policies: A closer look at the non-tariff measures in the 21st century*. Geneva: World Trade Organisation.

ADDENDUM: LIST OF DOCUMENTS USED IN COMPILING THE SADC NTM DATABASE

Botswana

Botswana Agricultural Marketing Board Act 1974. Available at http://www.elaws.gov.bw/docs/statutes/Botswana%20Statute%20Law%201974.pdf (Accessed: 16 April 2016).

Control of goods (importation of sugar) regulations under section 3, 1 January 1985. Available at file:///C:/Users/User/Desktop/ch46-07.pdf (Accessed: 16 April 2016).

Control of goods (Sugar exportation regulation) under section 3, 14 September 1979. Available at file:///C:/Users/User/Desktop/ch46-07.pdf (Accessed: 16 April 2016).

Control of goods, prices and other charges Act (Control of goods Act [import and export of agricultural products]) regulations under section 3, 25 November 1985. Available at: file:///C:/Users/User/Desktop/ch46-07.pdf (Accessed: 16 April 2016).

Control of goods, prices and other charges Regulation. 1979. Available at: file:///C:/Users/ User/Desktop/ch46-07.pdf (Accessed: 16 April 2016).

Customs and Excise (Act Cap 50:1) amended 2001. Available at: http://www.burs.org.bw/phocadownload/Revenue_laws/CAP%2050-03%20Customs%20and%20Excise%20Duty%20Act.pdf (Accessed: 16 April 2016).

Pest and Diseases Act of 1966, Chapter 30:02. Available at: http://www1.eis.gov.bw/EIS/ Policies/Environmental%20Policies/CAP%2035-02%20Plant%20Diseases%20and%20Pests%20Act.pdf (Accessed: 16 April 2016).

WTO document G/TBT/BWA/1, 13 November 2008.

WTO. 2008. Botswana Trade policy review.

Malawi

AECOM International Development. 2011. Technical Report: Regulatory Environment for Animal Feeds in Zambia, Malawi, Mozambique, Zimbabwe, Namibia and Botswana.

Mozambique Animal Disease Act 1990.

Animal Production Department, Government of Mozambique 2010). Livestock Statistics in Mozambique. Maputo, Mozambique.

CEPAGRI. 2009. Ministry of Agriculture: Agriculture Promotion Centre.

FAO and WFP. 2010. Crop and Food Security Assessment Mission to Mozambique, August 2010, Rome, Italy

FAO. 2011. Food and Agricultural Organisation Statistics. Rome, Italy.

International Fund for Agriculture Development (IFAD).2010. Country programme evaluation: Republic of Mozambique.

Matay, C. 2005. Towards a regional approach to biotechnology policy in Southern Arica.

Meat and Meat Product Act 1975. Available at: http://malawilii.org/mw/consolidatedlegislation/6702/meat_meat_products_act_pdf_21082.pdf (Accessed: 16 April 2016).

Milk and Milk Product Act 1986. Available at: http://faolex.fao.org/docs/pdf/mlw21744.pdf (Accessed: 16 April 2016).

Nang'ayo, F. 2006. The status of regulations for genetically modified crops in countries of Sub-Saharan Africa.

Overseas Development Institute. 2009 Interim Economic Development Partnership Agreements between the EU and African States/: Contents, challenges and Prospects.

Promar Consulting. 2011. Fact-finding Survey for the Support of Aid to Developing Countries. The Cassava Industries in Mozambique and Tanzania: Production, processing, distribution and consumption of cassava and its related policy challenges.

United Nations Conference on Trade and Development (UNCTAD). 2006. *An investment guide to Mozambique: Opportunities and conditions*. Geneva, Switzerland: UNCTAD.

United Nations Industrial Development Organisation. 2008. Capacity building for aflatoxin management and control in groundnuts in Malawi.

Mauritius

Bowen & Herrou-Aragon. 2003. Analysis of Mauritius's Trade policies in 2003.

Forum for Agricultural Research in Africa (FARA). 2011. Status of Biotechnology and Biosafety in sub-Saharan Africa: A FARA 2009 Study Report. FARA Secretariat, Accra, Ghana. (Affected products found in country report.)

IMANI Development Consultant. 2004. Review of Dairy Industry in Mauritius. Final report, June 2004.

IMANI Development Consultant. Review of Dairy Industry in Mauritius. Final report, June 2004.

IMANI Development. 2007 update Survey of Non-Tariff Barriers to Trade: Mauritius.

Neelia, S.A. 2007. Food inspection in Mauritius wit focus on fruit and vegetables. 12th International Training Course 'Harmonisation of Fruit and Vegetables Quality Assessment'.

PART VII – Frozen food Available at: http://www.gov.mu/portal/goc/moh/file/ fpart7.doc (Accessed: 2012-06-05).

Part XI – cereal, grain, pulse, legume, cereal product, starch and bread Available from: http://www.gov.mu/portal/goc/moh/file/fpart11.doc (Accessed: 2012-06-05).

PART XII – Tea, coffee, chicory, cocoa, and chocolate drink. [Online] Available from: http://www.gov.mu/portal/goc/moh/file/fpart12.doc (Accessed: 2012-06-05).

Part XIV PART XIV – Egg and egg product. Available from: http://www.gov.mu/portal/goc/moh/file/fpart14.doc (Accessed: 2012-06-05).

Part XIX – Tomato, vegetable and vegetable product. 2007. Available from: http://www.gov.mu/portal/goc/moh/file/fpart19.doc (Accessed: 2012-0605).

PART XVI – Edible oil or fat. Available from: http://www.gov.mu/portal/goc/ moh/file/fpart16.doc (Accessed: 2012-06-05).

PART XXI – Milk and milk product. Available from: http://www.gov.mu/portal/goc/moh/file/fpart21.doc (Accessed: 2012-06-05).

PART XXIII – Meat and meat product. Available from: http://www.gov.mu/ portal/goc/moh/file/fpart23.doc (Accessed: 2012-06-05).

Part XXVII – Alcoholic beverages. Available from: http://www.gov.mu/portal/goc/ moh/file/fpart27.doc (Accessed: 2012-05-06).

The Mauritius Cane Industry Authority Act No 40 of 2011. Available from: http://faolex .fao.org/docs/pdf/mat116806.pdf Accessed: 2012-06-05).

WTO Trade policy Review 2006. Mauritius.

WTO Trade policy Review/176. 2 November 2001

WTO Trade policy Review/176. 2 November 2001.

WTO Trade policy Review/176. 2 November 2002

WTO Trade policy Review/S/222. 18 September 1995. Trade Policy Review Mauritius Report by the Secretariat.

Mozambique

Sebei, E. 2007. Trade potentials between South Africa and Mozambique. Available from http://www.nda.agric.za/docs/researchP/MozambiStudy.pdf (Accessed: 21-05-2012).

Mozambique Decree No 56/1998 of 11 November 1998.

Decree No 52/1998 of 29 September 1998, as amended by Decree No. 37/2002 of 11 December 2002.

WTO Trade Policy Review 2001 – 2011.

Rial, D.P. 2014. Study of average Effects of Non-Tariff Measures on Trade Imports: Policy Issues in International Trade and Commodities. Research Study Series No 66.

Namibia

Agricultural Pest Act 1973. Available at: http://www.environment-namibia.net/tl_ files/pdf_ documents/legal/acts/ACT_1973-04_%2303_Agricultural%20Pests%20Act.pdf (Accessed: 16 April 2016).

Agronomic Industry Act N. 20 of 1992. Available at: http://www.commonlii.org/na/legis/num_ act/aia1992229.pdf (Accessed: 16 April 2016).

Animal diseases and Parasites Act of 1956. Available at: http://www.environment-namibia.net/ tl _files/pdf_documents/legal/acts/ACT_2005-09%20%2310%20Animal%20Diseases%20 and%20Practises%20Amendment%20Act.pdf (Accessed: 16 April 2016).

Customs and Excise Act No 20 of 1998. Available at: http://www.osall.org.za/docs/2011/ 03/ Namibia_Customs_and_Excise_Act_1998.pdf (Accessed: 16 April 2016).

Draper, P. & Khumalo, N. (eds.). 2007. *Trade in genetically modified foods*. Johannesburg, South Africa: South African Institute of International Affairs.

Gillson, I. & Charalambides, N. 2011. Addressing non-tariff barriers on regional trade in southern Africa.

Anon. Namibia Country Report, 2003. Available at: http://www.sadctrade.org/files/TPR %20 Namibia.pdf (Accessed: 16 April 2016).

Agricultural Product Standards Act, 119 of 1990. Available at: http://www.nda.agric.za/doaDev/ sideMenu/foodSafety/doc/Act%20119.pdf (Accessed: 16 April 2016).

Meat Industry Act, 1981. Available at: http://www.nammic.com.na/index.php/library/send/50-meat-industry/24-meat-industry-act-12-of-1981 (Accessed: 16 April 2016).

Foodstuff, Cosmetics and Dinfecants Amendment Act No 39 of 2007. Available at: http://faolex.fao.org/docs/pdf/saf85626.pdf (Accessed: 16 April 2016).

Customs and Excise Act No 20 of 1998. Available at: http://www.osall.org.za/docs/2011/03/ Namibia_Customs_and_Excise_Act_1998.pdf (Accessed: 16 April 2016).

Sirongo, K. S. 2007. *Trade Policy Review: Namibia*. Stellenbosch: Tralac.

South Africa

Animal Health Act No 7 of 2002. Available at: http://faolex.fao.org/docs/pdf/saf37562.pdf.

Animal Protection Act No 71 of 1962. Available at: http://www.rattyrascals.co.za/ animalprotectionact.html.

Meat Safety Act No 40 of 2000. Available at: http://www.nda.agric.za/doaDev/sideMenu /APIS/ doc/MEATSAFETY.pdf.

Foodstuff, Cosmetics and Disinfectants Amendment Act No 39 of 2007. Available at: https:// www.capetown.gov.za/en/CityHealth/Documents/Legislation/Act%20-%20Foodstuffs,%20 Cosmetics%20and%20Disinfectants%20Amendment%20Act%20-%2039%20of%202007. pdf.

Impact of the Consumer protection Act of 2009, on the Food Industry.

Agricultural Product Standards Act, 119 of 1990. Available at: http://www.nda.agric.za/doaDev/ sideMenu/foodSafety/doc/Act%20119.pdf

Abattoir Hygiene Act No. 121 of 1992. Available at: http://www.kzndard.gov.za/Portals/ 0/ Environment/EIA/ACTS/Abattoir%20Hygiene%20Act.pdf

Agricultural Pests Act No 36 of 1983. Available at: http://www.nda.agric.za/doaDev/sideMenu/ plantHealth/ docs/The%20Agricultural%20Pests%20Act,%201983%20(Act%20No.36%20 of%201983).pdf

Regulations relating to grading, packaging and marking of canned mushroom intended for sale in the Republic of South Africa: Amendment 2010.

Perishable Products Export Act No 9 of 1983. Available at: http://www.gov.za/sites/www.gov.za/ files/Act%209%20of%201983.pdf

GMO Act No 15 of 1997. Available at: http://us-cdn.creamermedia.co.za/assets/articles/ attachments/03158 genmodorgact15.pdf

Liquor Product Act No 60 of 1989. Available at: http://www.sawis.co.za/winelaw/download/ Regulations annotated_07_2012.pdf

Gillson, I. & Charalambides, N. 2011. Addressing non-tariff barriers on regional trade in southern Africa. Imani Development International Ltd, 2007. 2007 Update survey of non-tariff barriers to trade: Lesotho.

Wine and Spirit Control Act No 47 of 1970. Available at: http://www.gov.za/sites/www.gov.za/ files/a25-98.pdf.

Swaziland

Animal Disease Act No 7 of 1965.

Customs and Excise Act, 1964.

Import Control Order, 1976.

Import levy on agricultural products, 2009.

Levy on milk and dairy products, 2009

Liquor Act, 1964.

National Agricultural Marketing Board Act, 1985; Legal Notice No 2, 2000. Sales Tax Act, 1983.

Standards and Quality Control Act, 2001.

Standards and Quality Control Act, 2001.

The Agriculture Act of 1967 (Part XII).

Zambia

Dairies Industry Development Act No. 22 of 2010. Available at: http://www.ilo.org/dyn/natlex/ docs/ELECTRONIC/86264/97233/F1021916789/ZMB86264.pdf

Dairy Product Marketing and Levy Act 1964. Available at: http://www.parliament.gov.zm/sites/ default/files/documents/acts/Dairy%20Produce%20Marketing%20and%20Levy%20Act. pdf

Department of International Development. 2002. Assessment of trends in the Zambian agriculture sector.

Food and Agricultural Organisation. 2005. Analysis of the food situation in Zambia. FAO/WHO conference on food safety for Africa, Harare, Zimbabwe, 3–6 October 2005.

IMANI Development International Ltd. 2007 update Survey of Non-Tariff Barriers to Trade Zambia.

Pig Industry Act of 1964. Available at: http://www.zamlii.org/zm/legislation/consolidated-act/251.

Plant Pest and Disease (Importation) Regulation 1996. Available at: http://zambialaws.com/Subsidiary-Legislation/chapter-233-plant-pests-and-diseases-act-subsidiary-legislation.html#PLANT PESTS AND DISEASES (IMPORTATION) REGULATIONS

Plant Pest and Disease Act of 1959. Available at: http://www.zamlii.org/zm/legislation/consolidated-act/233

Tobacco Act of 1967. Available at: http://www.zamlii.org/zm/legislation/consolidated-act/237

United States Agency International Development (USAID). 2011. *Legal institutional reform in Zambia's agricultural sector*.

World Bank & USAID. 2006. *Zambia: SPS Management. Recommendations of joint World Bank/USAID Assessment Team*.

Tanzania

Abegaz, M. n.d. Mobilising aid for trade for SPS-related technical cooperation in East Africa. SPS balance sheet for Tanzania. (WTO, 28 January 2000).

Africa Region Working Paper Series No 42. 2002. Tanzania's Cotton Sector: Constraints and Challenges in a Global Environment.

Belino, E.D. 1992. Organisation of veterinary public health in Africa. *Rev. sci. tech. Off. Int. Epiz.* 11(1): 99–116.

East African Community (EAC). 2010. Catalogue of East African Community Standards.

FAO/WHO. 2005. Effective food control system: Practical approaches for the African region. Development of a national strategy for food control, the experiment of Tanzania.

Parliament of Tanzania. 1968. Liquor Act of 1968.

Tanzania Food and Drug Authority. 2009. Guidelines for application for registration of pre-packed food in Tanzania. Report No 2.

The United Republic of Tanzania Ministry of Health and Social Welfare Tanzania Food and Drug Authority. 2006. Guidelines for importation and exportation of food.

United Nation Conference on Trade and Development. 2005. Cost of the Agri-food safety and SPS compliance: United Republic of Tanzania, Mozambique and Geneva: Tropical fruits.

Zimbabwe

Export Processing Zones Act [Chapter 14:07]. 2002. Available at: http://www.parlzim.gov.zw/acts-list/export-processing-zones-act-14-07 (Accessed: 16 April 2016).

Fertilisers, Farm Feeds and Remedies Act [Chapter 18:12]. 2001. Available at: http://faolex.fao.org/docs/pdf/zim24974.pdf (Accessed: 16 April 2016).

Fruit Marketing Act [Chapter 18:13].2001. Available at: http://faolex.fao.org/docs/pdf/zim26296.pdf (Accessed: 16 April 2016).

Grain Marketing Act [Chapter 18:14]. 1979. Available at: http://faolex.fao.org/docs/pdf/zim60693.pdf (Accessed: 16 April 2016).

Liquor Act [Chapter 14:12]. 2001. Available at: http://www.parlzim.gov.zw/acts-list/liquor-act-14-12 (Accessed: 16 April 2016).

Seeds Act [Chapter 19:13]. 2001. Available at: http://www.wipo.int/wipolex/en/text.jsp?file_id=214681 (Accessed: 16 April 2016).

Sugar Production Control Act [Chapter 18:19]. 1973. Available at: http://faolex.fao.org/docs/pdf/zim26311.pdf (Accessed: 16 April 2016).

Tobacco Industry and Marketing Act [Chapter 18:20]. 2001. Available at: file:///C:/Users/User/Desktop/TOBACCO_INDUSTRY_AND_MARKETING_ACT_18_20.pdf (Accessed: 16 April 2016).

Trade and Markets Division. 2003. Economic and Social Development Department. WTO agreement on agriculture: The implementation of experience. Available at: http://www.fao.org/publications/card/en/c/914a8b48-e21a-5983-89f0-df8038436a06/ (Accessed: 16 April 2016).

Other Institutions

COMESA Secretariat Document

FAO policy documents

IFAD Documents

ITC Official Data

SACU Secretariat Documents on Industrial Policy

SADC Secretariat Documents

UNCTAD TRAINS Database

World Bank Documents

World Economic Forum (2014) The Global Enabling Trade Reports. Geneva

World Trade Organisation Integrated Trade Intelligence portal (I-TIP)

World Integrated Trade Solutions (WITS)

World Trade Organisation, Trade Monitoring Database

World Trade Organisation, WTO Trade Policy Reviews 1998 – 2012