Impediments to Intra-Regional Trade in Sub-Saharan Africa

Prepared for the Commonwealth Secretariat

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September 2010

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List of acronyms

AEC	African Economic Community
AFTA	ASEAN Free Trade Area
ASEAN	Association of Southeast Asian Nations
CEMAC	Communauté Économique des États d'Afrique Centrale
CET	Common External Tariff
CFA	Communauté Financière Africaine
CIF	Cost, Insurance and Freight
CMA	Common Monetary Area
COMESA	Common Market for Eastern and Southern Africa
COMTRADE	(United Nations) Commodity Trade Statistics
CU	Customs Union
EAC	East African Community
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EU	European Union
FE	fixed effect
FOB	Free on Board
FTA	Free Trade Area
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GMM	Generalised Methods of Moments
HS	Harmonised System (of trade classification)
IGAD	Intergovernmental Authority on Development
IOC	Indian Ocean Commission
MMTZ	Malawi, Mozambique, Tanzania and Zambia
NTB	Non-tariff barrier
NTM	Non-tariff measure
QR	Quantitative restriction
RCA	Revealed Comparative Advantage
REC	Regional Economic Community
RoW	Rest of the World
RTA	Regional Trade Agreement
SACU	Southern African Customs Union
SADC	Southern African Development Community
SITC	Standard International Trade Classification
SOE	State-Owned Enterprise
SPS	Sanitary and phytosanitary standards

SSA	Sub-Saharan Africa
TBT	Technical barriers to trade
TMEA	TradeMark East Africa
TMSA	TradeMark Southern Africa
TPR	Trade Policy Review
TRAINS	(UNCTAD) Trade Analysis and Information System
UEMOA	(see WAEMU)
UMA	Arab Maghreb Union
UNCTAD	United Nations Conference on Trade and Development
VER	voluntary export restraint
WAEMU (also UEMOA)	West African Economic and Monetary Union (Union Economique et Monétaire Ouest Africaine)
WAMZ	West African Monetary Zone
WTO	World Trade Organization

Executive summary

Whilst there have been multilateral, regional and bilateral reductions in tariffs among countries and regions, including in sub-Saharan Africa (SSA), non-tariff barriers (NTBs) can act as important constraints on trade and limit the gains from increased market access through tariff reductions. As traditional barriers to trade such as tariffs decline there are concerns that NTBs may subsequently increase. There are a range of different types of NTBs, some of which may reflect perfectly legitimate public policy concerns. We define a NTB as an unnecessarily restrictive non-tariff measure (NTM) which affects trade in goods. The presence of NTBs can undermine the gains from trade liberalisation for new entrants and constrain diversification efforts, across products as well as markets.

Intra-regional trade in SSA appears to be low and there are different views as to why this is the case; in addition to how and why increased intra-regional trade on the continent may be beneficial. Although it is often stated that NTBs are important constraints to trade in SSA, there have been limited attempts so far to systematically quantify their actual impact on trade. This analysis sets out to explore the extent to which intra-regional trade flows for African regional economic communities (RECs) are constrained by NTBs. A quantitative methodology for the assessment of the impact of reported NTBs on trade flows is developed and then applied to the Southern African Development Community (SADC). Based on the results of a quantitative assessment of the identified impacts of NTBs on intra-regional trade, we suggest policy measures and steps towards addressing them.

Regional Integration: Theory and Practice

One intended effect of a regional trade agreement (RTA) is, through the reduction and removal of tariffs, to enable more efficient producers in a region expand production (and reap economies of scale and scope) to the advantage of consumers and the detriment of less competitive producers. However, this potential may be limited unless other barriers to trade are also addressed, and harmonised. The process of fostering closer regional integration means developing new policy tools. This includes the development of regional NTMs to increase intra-regional trade flows, such as harmonised standards to facilitate trade, as well as rules of origin (RoO) which are required to avoid trade deflection. Some NTMs may reflect legitimate public health concerns, others more strategic regional or national developmental objectives. The challenge is to ensure that these types of NTMs are not unnecessarily trade restrictive and so become NTBs.

The objectives of regional RoO include ensuring that members of RECs benefit from market access entitlements relative to competition from third party countries. But if too restrictive or uncoordinated with emerging production networks and business strategies, these new rules may render regional trade liberalisation strategies ineffective. Regional standards or RoO may undermine potential dynamic gains if producers are not informed about them, unable to meet them or if they are implemented in an *ad hoc*, unpredictable and less harmonised way. Moreover, should the real intent of NTMs applied on intra-regional trade by individual members of RECs be to limit rather than better manage trade flows, for example, because of fears of disproportionate economic benefits accruing to other regional partners. Distinguishing between the intent and impact of NTMs on trade helps to determine the extent to which they may actually be NTBs.

This information may be particularly helpful for those African RECs that seek deeper economic integration. There are many RTAs on the African continent, overlapping and complementing each other in some cases, but with conflicting objectives in others. For countries covered by more than one trade agreement, importers have a choice of regimes under which to import goods. For small and medium sized enterprises (SMEs), overlapping membership may pose particular difficulties through increasing the trade costs of exporting to different regional markets which may have varying standards-related entry requirements. Consequently, this could reduce the potential for benefits which result from scale and therefore constrain product and market diversification efforts. Although replacing overlapping membership with one all-

embracing REC may help in reducing the costs of trading for firms, it also makes the task of harmonizing rules and regulations greater for governments.

Assessing the Impact of NTBs

Information about the coverage and impact of NTBs is often hard to collect. This means that their impacts on trade and economic welfare are not easy to quantify or model (Fugazza and Maur, 2008). Despite these measurement challenges, this analysis attempts to assess the welfare impacts of introducing or removing NTBs on intra-regional trade in SADC. Estimates of the potential welfare impacts of NTBs can help policy makers act to on them.

Approaches to measuring NTBs range from frequency-type inventories to price comparison measures (tariff equivalents), to quantity impact measures based on estimation of trade flows. The United Nations Conference on Trade and Development (UNCTAD) has been collecting data on the incidence of NTBs for a large sample of countries in its Trade Analysis and Information System (TRAINS). Its database, which is country as well as commodity specific, uses a classification of over 100 trade measures, including those with a discretionary or variable component. Its main source of information includes GATT notifications, government publications and WTO Trade Policy Reviews (TPRs).[1] The incidence of reported NTBs, either as a count or percentage of coverage of specific product lines (HS or Standard International Trade Classification (SITC)) include such measures as:

- price control measures, such as multiple exchange rates, or foreign exchange allocation;
- finance control measures, such as anti-dumping or countervailing measures;
- quantity restrictions, such as non-automatic licensing, quotas;
- monopolistic measures;
- technical measures, such as regulations and customs procedures; and
- miscellaneous including subsidies.

Despite the range of NTBs that may be reported, most of those listed fall in the category of 'technical measures'. The database does not include any measures related to: corruption – which may include the use of roadblocks, export related measures, government procurement, intellectual property rights and other investment related measures. Each measure listed on the database is given an equal weight regardless of the intensity of the measure and its trade related impacts. This limits the ability to distinguish between different types of NTB reported in terms of the severity of trade impacts. Despite this, the TRAINS database is to the best of our knowledge the most systematic source of data on NTBs available across countries and products.

Kee et al. (2008) use UNCTAD TRAINS data to compute indices of trade restrictiveness for NTBs across countries. However, as these indices are computed on the basis of the actual effects that these measures have on trade on one year for each country (and these years differ across countries), using them to estimate the effects of NTBs on trade would lead to biased estimations.[2] We therefore take a different route and undertake a systematic evaluation of the actual impact of reported NTBs on the imports of selected SADC countries (HS 6-digit level) over a number of recent years. Because of data limitations, our analysis is limited to the SADC region and within it to Botswana, Namibia, South Africa and Swaziland; these countries therefore comprise our SADC sample.

1 However, as noted by Fugazza and Maur (2008), the categories used by TRAINS are not the same as those of the WTO. Although the database covers a wide range of NTBs, most listed fall within the Technical Measures category.

2 In particular, the use of such indices would make the estimation endogenous.

The idea is to perform a direct test by matching the NTBs recorded by UNCTAD, with corresponding import data from UNComtrade. Because the NTBs reported to UNCTAD TRAINS have not actually been assessed in terms of their trade restrictiveness, and the evidence on the extent to which they actually constrain trade is not available, we use the term NTM to refer to them, until such time as we have obtained the evidence to classify them as actual barriers to trade - NTBs.

We create three different non-tariff measure (NTM) indicators: a 'NTM partial coverage' variable; a 'NTM full coverage' variable; and 'NTM any coverage' variable, which is a sum of the two.[3] This is because of the nature of NTB reporting, sometimes it is not known whether a measure applies to each 6-digit sector or not. For instance a measure can be listed as applying to HS 02 (vegetable products) but with a 'partial coverage indicator', implying that the measure does not cover *every* 6-digit code within the 2-digit chapter. We then match the NTM data with bilateral import data (in current thousand US dollars) at the HS 6-digit sector level and create three different samples according to the trading partner considered: full; SADC only; and non-SADC.

We test whether imports from the four reporting countries in a sector where one or more NTM is imposed at year *t* grow less (or decline more) than those in sectors which do not experience an increase in NTMs in *t*, as well as whether imports in a sector grow less (or decline more) in those periods when NTMs are not applied, relative to periods when NTMs are imposed. As our interest lies mainly in the impact of NTMs on intra-regional trade, we test for any differential impact of NTMs on imports from SADC countries vis-a-vis from other countries. In this way we examine whether NTMs are more or less of a constraint for intra-regional flows relative to flows with the rest of the world.

Results from Quantitative Analysis

The results of the analysis and estimation of the NTM coefficients are presented in Table 1. We find that the NTM dummy is negative and highly significant for the imports from SADC countries (Column 2), while it is positive and significant for the imports from non-SADC countries (Column 3). That is we find that the introduction of one or more NTMs in a sector significantly penalises imports from other SADC countries in that sector (intra-regional trade) to the benefit of non-SADC countries, whose exports increase.

This confirms the hypothesis that the NTBs reported to TRAINS are indeed barriers to intra-regional trade for SADC countries. Moreover, to the extent that these barriers divert imports away from regional towards non-regional partners, their presence seems to stifle intra-regional trade.

What drives this differential impact? There are two potential explanations: first, SADC countries could be on average much less able to adjust to the NTBs listed than other exporters to the Southern African region; second, SADC exports could be concentrated in product lines particularly susceptible to NTBs. Therefore the eventual difference in exposure by exporter would come from the sectoral composition of its exports to the SADC countries considered. Results from further analysis suggest that a little more than half of the impacts of the NTBs analysed on trade comes from the different abilities of exporters to adjust to the imposition of them.

[3] The results presented here are based on the use of the 'NTM full coverage' variable, but they hold using the 'NTM any coverage' variable as well.

Table 1: Impacts of NTBs registered on TRAINs on Intra-Regional Trade in SADC

	1	2	3
	All	SADC	No SADC
NTM dummy (full coverage)	-0.055	-2.099***	0.236***
	(0.078)	(0.268)	(0.081)
Year Effects	YES	YES	YES
Importer-product-exporter effects	YES	YES	YES
Observations	428,208	76,500	351,708
Nr. of groups	207,800	33,122	174,678

*Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%. Dependent variable is the percentage growth of imports over the previous year. Importing countries are Botswana, Namibia, South Africa and Swaziland. Endogenous variable in GMM estimations are the NTM variable and the NTM-sectoral interaction terms.*

We also analysed the impact of NTBs separately by importing country, for Botswana, Namibia and South Africa (the data for Swaziland do not allow a separate estimation). The analysis reveals that NTBs applied by South Africa have a more significant negative impact on imports from SADC than Botswana and Namibia. On the other hand in the case of Namibia and Botswana, whose imports from SADC are mainly from South Africa, the NTB coefficient is less significant, which is consistent with the hypothesis that traders in South Africa are better able to tackle these barriers than other SADC countries.

Efforts to Address NTBs in SADC

For those in favour of regional integration in SSA the results of the quantitative analysis undertaken should be of concern: they suggest that the imposition of NTBs by SADC countries is usually handled better by non-SADC than SADC countries, and within SADC by the economically larger members. In light of these results, initiatives aimed at tackling NTBs and their impacts on trade at the regional level become even more important.

We supplemented the quantitative analysis undertaken with a qualitative assessment and synthesis of NTBs identified in most recent TPRs and other regional databases. Most of the NTBs mentioned as potentially problematic for importers and exporters in the recent WTO TPRs[4] for SADC members fall within the following categories: price controls; quantity restrictions; and miscellaneous, such as other charges intended to protect local industry and/or encourage local processing. Although not explicitly discussed in TPRs as being problematic, a number of areas are mentioned as requiring closer regional cooperation and harmonisation of rules and regulations including: competition policy; protection of domestic industries; SPS/TBT; rules of origin; and customs procedures.

We analysed recent notifications of NTBs to the NTB Monitoring Mechanism (established to support efforts to integrate the economies of the Common Market for Eastern and Southern Africa (COMESA), the East

[4] We reviewed the most recent TPRs available for SADC members, most of which are dated from 2006 onwards. No reviews are available for Democratic Republic of Congo, the Seychelles or Zimbabwe.

African Community (EAC) and SADC as part of the Tripartite Agreement). At the current time the distribution of reported NTBs across sectors, and products, is not clear. However, most complaints registered relate to South Africa and its trade-related administrative NTBs (though it is not clear which types). This category is also the most frequently reported barrier for all SADC members, followed by export and import licences and transit issues. NTBs imposed on importers from outside of SADC, and SSA, are not reported as much and may therefore be less problematic for importers and exporters, or less applied. These results appear to substantiate those of the quantitative analysis.

Policy Implications

Monitoring the nature, evolution and impacts of reported NTBs constitutes one step towards reducing negative impacts on trade and economic welfare. For policy makers, responding to private sector concerns about NTBs may entail policy shifts and the simplification of rules and regulations. There may be a need for increased awareness-raising among producers and traders about new rules and regulations. In addition to the provision of support to assist producers comply with NTMs. These steps may help avoid legitimate policy tools becoming barriers to trade.

Once problematic NTBs have been identified, and analysed, it makes sense to start classifying them according to their intent and severity of trade impact, with a view to beginning to address them at the national and regional level. It might be easier to begin this approach on product-specific basis, first. For example, steps towards addressing NTBs may include: identifying regional priority sectors and products; monitoring reported NTBs on these sectors and products; analysing the intent and impact of reported NTBs; and reducing the negative impacts of them on trade either through their removal, harmonization of related policy, or provision of appropriate support to producers.

In practice, however, progress on the reduction of NTBs is likely to take time, be costly and involve difficult trade-offs. Specific policy recommendations which arise from our analysis for SADC include:

- *Improving the coding of the new tripartite NTB monitoring database*. For example, by sector and product, including indicators related to the severity of impact for importers and exporters - in terms of time, cost and related trade impacts.
- *Linking the monitoring of NTMs to compliance and enforcement mechanisms.* Once NTBs have been reported and analysed they need to be acted upon which requires dialogue and collaboration at the regional level and between national institutions.
- *Investing in conformity infrastructure*. Limited testing infrastructure constrains the ability of members to sign mutual recognition agreements with regional partners and instead the fall-back position becomes the standards of the most dominant trading partner, which may themselves constitute NTBs for lesser developed regional partners. Results from our analysis suggest the economically smaller members of SADC find NTBs a particular challenge, which may be a result of scale and a limited ability to spread fixed costs over a large export basket, or because of limited conformity infrastructure within country.
- *Harmonising infant industry protection*. Article 21 of the SADC Protocol on the Protection of Infant Industries permits the suspension of certain obligations of the Protocol, but it also specifies that terms and conditions should be imposed. However, at present there appears to be a policy void. Although SACU members are obliged to have a competition policy, commitments needs to be matched with enforcement. This is to say, infant industry across the SADC region could be much stronger if coordinated and monitored. This includes identifying regional priority products and harmonising related policy (for example, creating simple, consistent and predictable RoO) so as to spur regional growth dynamism.

As efforts to foster closer regional integration in SADC gather pace it is important to note that the monitoring of NTBs does not end as efforts begin to reduce negative impacts, but instead needs to

continue as regional surveillance mechanisms, policy and related compliance and enforcement mechanisms further develop and strengthen. Whether or not efforts to further promote regional integration on the continent in the 21st century can lead to increased intra-regional, as well as international trade, arguably depends on a more strategic approach to 'behind the border' issues being adopted so that the potentially dynamic gains from deeper integration may be harnessed.

Introduction

Whilst there have been multilateral, regional and bilateral reductions in tariffs among countries and regions, including in sub-Saharan Africa (SSA), non-tariff barriers (NTBs) can act as important constraints on trade and limit the gains from increased market access through tariff reductions. As traditional barriers to trade such as tariffs decline there are concerns that NTBs may subsequently increase. We define a NTB as an unnecessarily restrictive non-tariff measure (NTM) which affects trade in goods. The presence of NTBs can undermine the gains from trade liberalisation for existing and new entrants, and can impede diversification efforts, across products as well as markets.

Intra-regional trade in SSA appears to be low and there are different views as to why this is the case; in addition to how and why increased intra-regional trade on the continent may be beneficial. There are different types of determinants of intra-regional trade. These range from economic variables, such as differences in factor endowments and complementarities in trade structures, to policy variables such as tariffs and NTBs. Other aspects such as geographical location may serve as a natural non-tariff barrier to accessing particular markets, but like other market failures may be overcome through effective and targeted government intervention (Calì 2009).

NTBs are perceived to be important constraints to trade in SSA but there have been limited attempts so far to systematically quantify their *actual* impact on trade. Estimates as to the potential welfare impacts of NTBs can help to provide information to policy makers to act on them. How do NTBs impact on intra-regional trade? Is there any differential impact of NTBs on regional partners *vis-à-vis* third parties? This information is particularly relevant for those regions seeking to foster deeper economic integration and enhance intra-regional trade flows. This paper sets out to explore the extent to which intra-regional trade flows on the continent are constrained by the imposition of NTBs. We develop a quantitative methodology in order to undertake this analysis which uses product level import and NTB data.

This paper is based on three complementary building blocks and is organised as follows: Section One briefly reviews the theory and practice of regional integration, which suggests that similar production structures can impede intra-regional trade for low-income countries but may be conducive to intra-regional trade between high-income countries. We present and discuss recent trends in intra-regional trade flows in SSA, and in Economic Community of West African States (ECOWAS) and Southern African Development Community (SADC), in particular. We assess trade complementarities using specific indices, including revealed comparative advantages (RCAs), and discuss the implications of these findings for potential increases in intra-regional trade in sub-Saharan Africa.

Section Two introduces the pathways through which NTBs may impact on trade, including intra-regional trade. We develop a methodology to quantify and analyse the impact of NTBs on intra-regional trade flows for SADC as a group and on selected members (Botswana, Namibia, South Africa and Swaziland). Section Three complements the analysis with a qualitative assessment of NTBs based on the most recent World Trade Organisation (WTO) Trade Policy Reviews (TPRs) for SADC countries. We discuss the extent to which the effects of different types of NTBs on intra-regional trade are being addressed by existing policy measures. Finally, we conclude with a summary of the key findings and policy messages. Recommendations are provided, based on the results of our analysis and which draw on the experience of other regions in their efforts to harmonise and reduce NTBs so as to spur increases in intra-regional trade.

1 Intra-regional trade in sub-Saharan Africa

1.1 Theory and practice

Most countries now belong to at least one bilateral and regional trade agreement (RTA) which have continued to increase in number, and size, since the early 1990s; this includes in SSA. There are several stages in the regional economic integration process which range from the formation of a free trade area (FTA) to a customs union (CU) and the establishment of an economic and monetary union. Most of the agreements signed up to date constitute FTAs. However, an important step in the regional integration process is the formation of a CU, which not only eliminates tariffs and quotas on trade amongst member countries but also establishes a common external tariff (CET) which is applied to trade with non-members and third party countries.

The literature on regional integration dates back to at least Viner (1950), who suggested that the effects of regional integration on trade can be either trade creating or trade diverting. Like any form of liberalisation, one intended effect of an RTA is to allow the more efficient producers in the region to expand production (and reap economies of scale) to the advantage of consumers and the detriment of less competitive producers. This is called trade creation. Trade diversion occurs when the removal of tariffs within the region leads to goods that were previously imported from outside (from the cheapest global source) being replaced by more expensive goods produced inside the region which can be sold for less because they no longer have to pay any import duty. Consumers still gain, although by less, but governments lose more in tariff revenue and the country as a whole is able to obtain fewer imports for a given value of exports. This implies that regional integration can lead to further trade, but that these flows may not always be welfare enhancing.

However, there are other important roles that closer regional integration and cooperation can play. Regions can better support the provision of, for example, public goods; this includes 'hard' infrastructure like roads, energy and the physical networks required to support trade, as well as 'soft' infrastructure such as institutions, related to the governance of trade. Many competitiveness challenges are regional in nature. For example, a landlocked country is dependent on the appropriate infrastructure being available in transit countries for its trade flows. National development programmes will not normally consider activities with strong regional (or international) externalities as the benefits cannot be fully appropriated nationally.

There have been various attempts to analyse the relationship between regional integration and trade in SSA. These studies suggest that the new wave of regionalism which began in the 1990s (with the creation of new blocs and the revamping of old blocs) has not led to further intra-regional trade.[5] For example, te Velde (2006) argues that because intra-regional trade in Africa covers only a small percentage of total trade, any trade (and hence economic) effect of lower tariffs is likely to be small. Others have therefore argued that an alternative approach could be to foster deeper integration through the harmonisation of trade rules and standards and institutional co-operation (Gasiorek and Holmes, 2008). *New* regionalism moves beyond static trade creation benefits and emphasises the potential dynamic trade and welfare gains from reductions in administration, transaction costs and the elimination and/or harmonisation of other types of NTBs. The reduction of NTBs and harmonisation of other non-tariff measures (NTMs) such as standards and customs clearings procedures constitute a deeper form of integration, with the potential for more dynamic gains in terms of trade creation if harnessed correctly.

[5] See te Velde (2005) for an overview of the literature and the links between regional integration and poverty.

1.2 Newer contributions to theory

The literature on regional integration and trade has been informed by new developments within economic theory. The model developed by Venables (2003) includes some aspects of new trade theory such as the recognition of forces that may foster economic convergence as well as divergence, for example agglomeration effects. However, despite this, the model still relies on the classical theory of comparative advantage, which underpins the theory of the CU as developed by Viner (1950).[6] Venables extends Viner's model and shows how the creation of a CU between two low-income countries with a similar comparative advantage (and therefore factor endowments) may lead not only to trade diversion but also to greater economic divergence. This is because of traditional forces of trade diversion and creation working in a perfectly competitive environment. Venables (2003) therefore argues that a greater potential for welfare gains exists from trade between countries with vastly different factor endowments (similar to Heckscher-Ohlin theory). This could take the form of the inclusion of a more developed country within South–South FTAs, leading to North–South–South arrangements.[7]

Others have argued that although the inclusion of countries with vastly different *static* comparative advantages may help to promote more economic convergence than divergence, the gains may still be disproportionate. Krugman (1993) and Puga and Venables (1995) show how relatively large welfare gains may accrue to the most developed country of a regional trade agreement, or hub, because of conditions of imperfect competition and the agglomeration effects of industries that choose to cluster closer together. They try to better include more *dynamic* aspects of trade-induced growth fostered through the process of regional integration, but similarly retain their classical roots by basing their analysis on comparative advantage as indicated by technological differences (similar to the Ricardian model). The creation of an FTA or CU is likely to have both trade creation and diversion effects; the efficiency and welfare enhancing, or reducing, effects of which depend on what process – creation or diversion – dominates.

There are many different pathways through which closer regional integration and the formation of an FTA can affect intra- and extra-regional trade. This study focuses on the policy environment and explores the extent to which NTBs may undermine regional integration efforts and constrain intra-regional trade. Before outlining these pathways, it first presents recent trends in intra-regional trade flows in SSA and within two selected regions in particular. It then analyses the structural characteristics of trade within these two regions and whether or not its composition suggests the potential for increases in intra-regional trade, based on traditional and newer contributions to theory.

1.3 Trends

The African Economic Community (AEC) – an integral part of the African Union – sets out the continental framework for economic integration. It recognises that the process of fostering economic integration at the continental, regional and sub-regional levels requires the rationalisation and harmonisation of Regional Economic Community (RECs).[8] In addition to reductions in tariffs this includes due consideration of 'soft' infrastructure related to the governance of intra-regional trade, such as rules of origin, product standards and accreditation systems, the harmonisation of which may help to reduce costs for business and therefore facilitate increases in intra-regional trade.

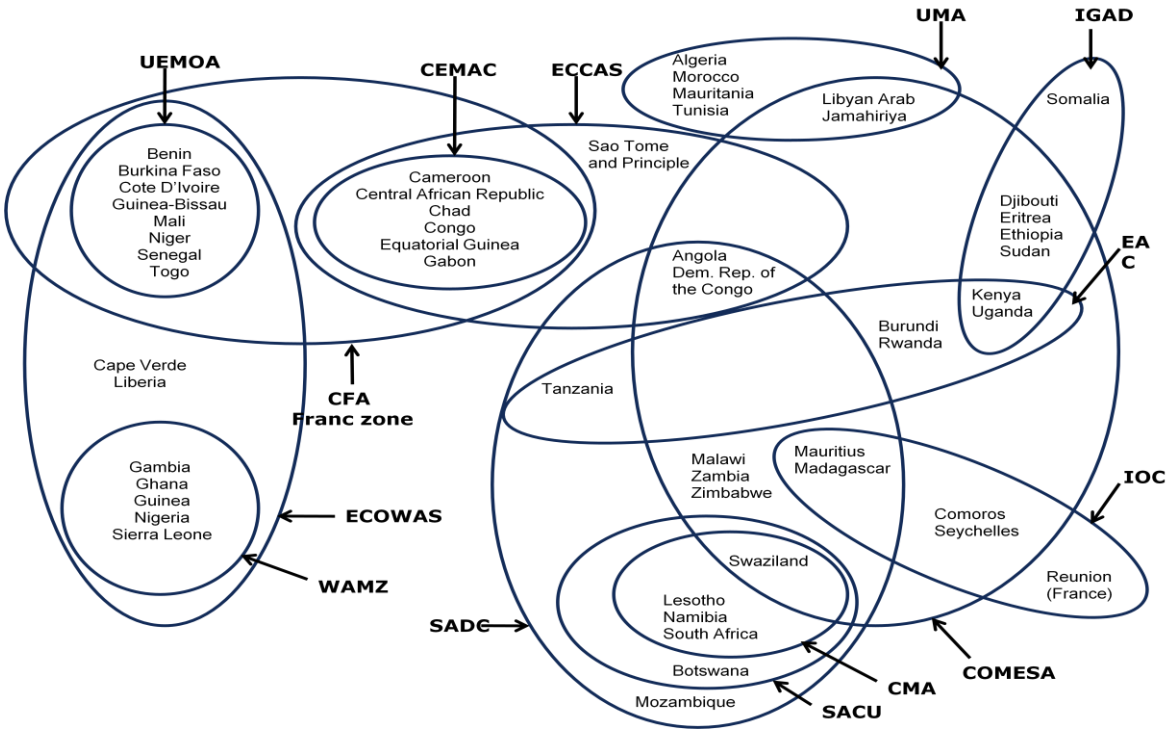
[6] Which is itself a neoclassical model since it assumes perfect competition in commodity and factor markets and factor mobility within country but not between countries; economies of scale are not considered.

[7] The European Commission also believes that regional integration between developed and developing countries can be beneficial; it has recently promoted North–South agreements, which are intended to build on Southern regional integration, termed South–South–North FTAs (European Commission, 2002). See also Bilal (2007).

[8] See UNCTAD (2009).

RTAs currently on the African continent are overlapping and complementing each other in some cases but at times have conflicting objectives. Figure 1 shows the memberships of these agreements in 2009. For countries covered by more than one agreement, importers have a choice of arrangement under which to import goods, which does not necessarily create difficulties. It may, however, introduce particular difficulties, as well as costs, for small and medium sized firms seeking to export. If product standards are more stringent in one market compared to another the complexity of exporting to different markets within a given region increases. This may reduce potential scale benefits and therefore constrain product and market diversification efforts. Although replacing overlapping membership with one all-embracing REC may help in reducing costs for firms, it also makes the task of harmonizing rules and regulations greater for governments.[9]

Figure 1: Regional trade agreements in Africa

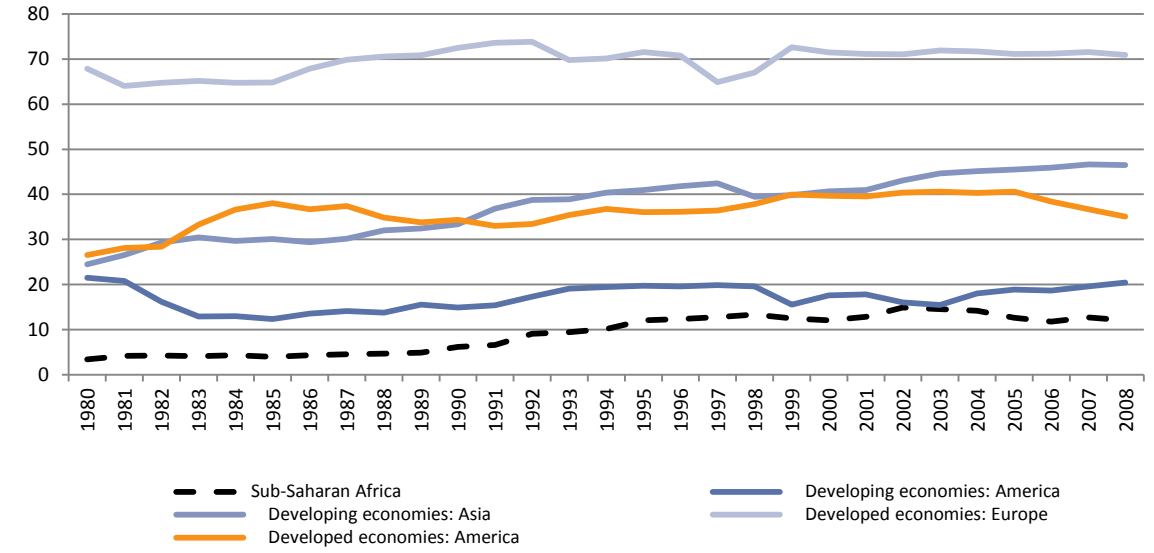


Source: Adapted from UNCTAD, 2009a.

SSA has the lowest share of intra-regional exports as a proportion of total in the world (Figure 2) and this has been the case since the 1980s. There has been growth in intra-regional exports since the 1990s, from 6% in 1990 to 12% in 2000, compared to an increase of just 3% between 1980 and 1990. But this growth has not been sustained: intra-regional exports were 12% of total exports in 2008, the same level as in 2000. Despite this, it is important to point out that unlike some other regions such as developing America, SSA has not seen its intra-regional exports decrease. But nor has it seen as rapid increase in intra-regional exports as other regions such as developing Asia, which managed to almost to double its intra-regional exports over the period 1980–2008.

[9] Appendix 1 presents the major RECs on the continent and their ultimate objectives, and includes UNCTAD's (2009) summary of their current status.

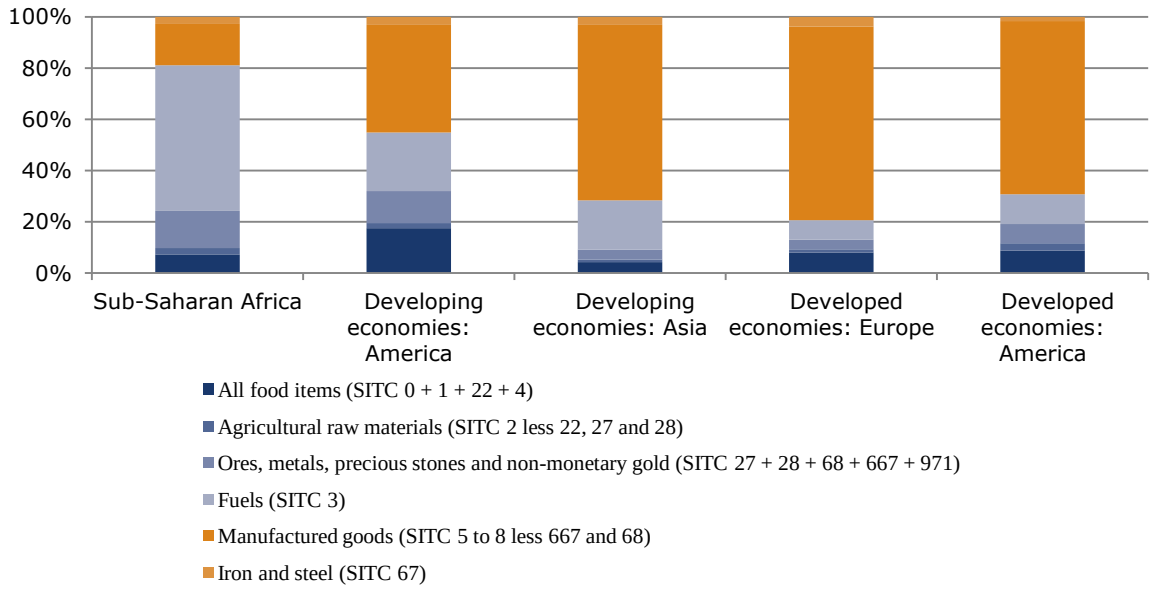
Figure 2: World: intra-regional exports as a proportion of total exports, 1980-2008 (%)



Source: Adapted from UNCTAD 2009b.
Note: Countries included within each REC for each year are not known.

Compared to other regions such as developing Asia and the Americas, SSA's exports are highly concentrated and consist predominantly of fuels (Figure 3). Despite this aggregate concentration in less sophisticated primary products, which are considered to embody limited potential to sustain trade dynamism, there are some clear differences in the recent performance of intra-regional trade flows within SSA's RECs, and their composition.

Figure 3: Composition of world exports by region, 2008

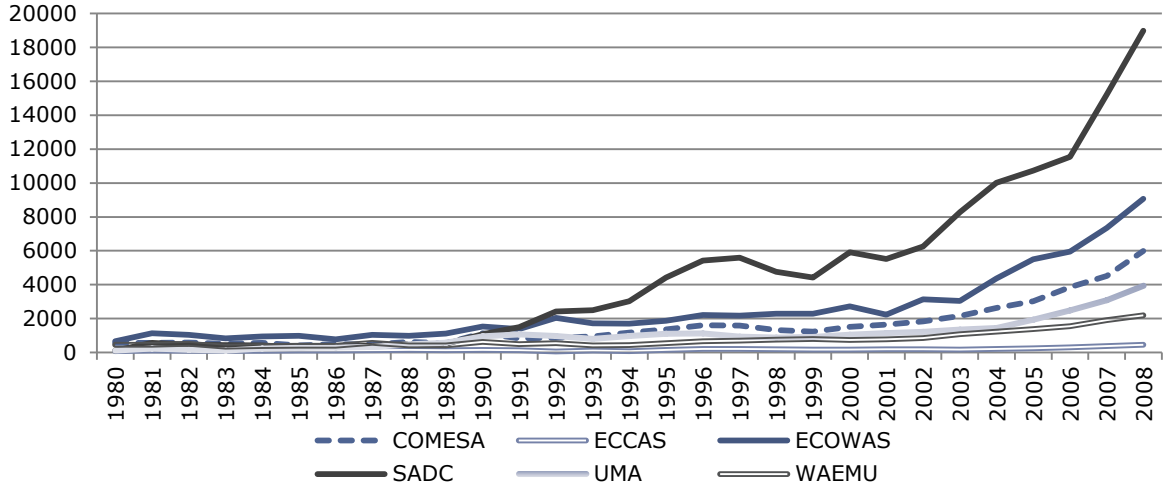


Source: Adapted from UNCTAD 2009b.
Note: Countries included within each REC for each year are not known.

As shown in Figure 4, growth in intra-regional trade appears to have been faster for SADC and ECOWAS than for other RECs in Africa. The value of intra-regional exports was highest in ECOWAS – which also encompasses the West African Economic and Monetary Union (WAEMU) – during the period 1980 to 1990.

However, since the first half of the 1990s intra-regional trade flows within SADC have accelerated, surpassing the value of those within ECOWAS. The increase in value of SADC intra-regional exports has been considerable, particularly from 2000 onwards.

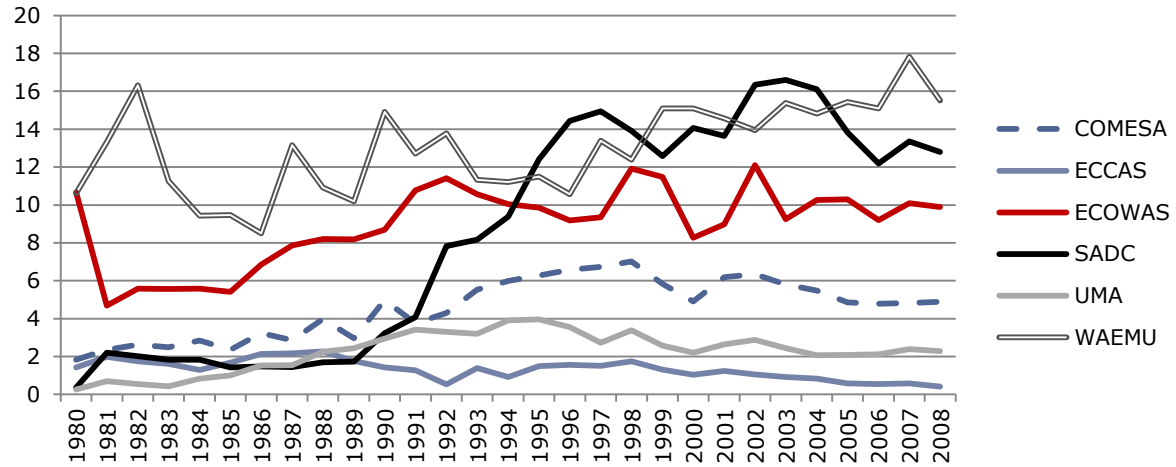
Figure 4: SSA RECs value of intra-regional exports (US$ million), 1980-2008



Source: Adapted from UNCTAD 2009b.
Note: Countries included within each REC for each year are not known

This recent take off in intra-regional exports within SADC is much more pronounced when presented as a share of total exports (Figure 5). There appears to have been some tailing-off between 2000 and 2008, which suggests that the share of the region's exports to the rest of the world (RoW) have simply growth faster in terms of value over that period, whereas in the period 1990 to 2000 intra-regional exports grew faster. Although lower in value, intra-regional exports for the sub-group of WAEMU as a proportion of total can be seen to have exceeded those of ECOWAS since 1980, and even though erratic, since the late 1990s their growth appears to have been sustained.

Figure 5: Intra-regional exports as a proportion of total exports in SSA RECs, 1980-2008 (%)

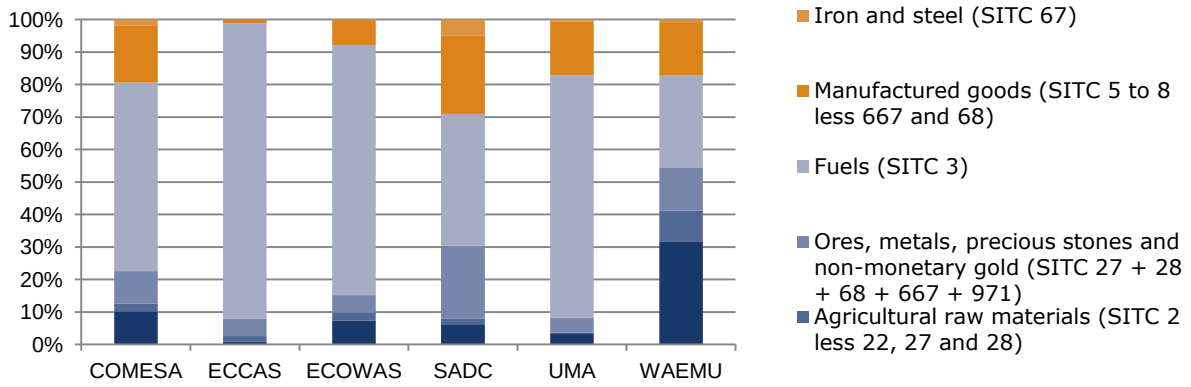


Source: Adapted from UNCTAD 2009b.
Note: Countries included within each REC for each year are not known.

The sub-region of WAEMU has a more diversified export basket than ECOWAS; food items comprise a larger share of exports than fuels, and manufactured goods are more prominent (Figure 6). However,

compared to both these regions SADC has a much larger share of manufactured goods and lower share of primary products in its export basket.

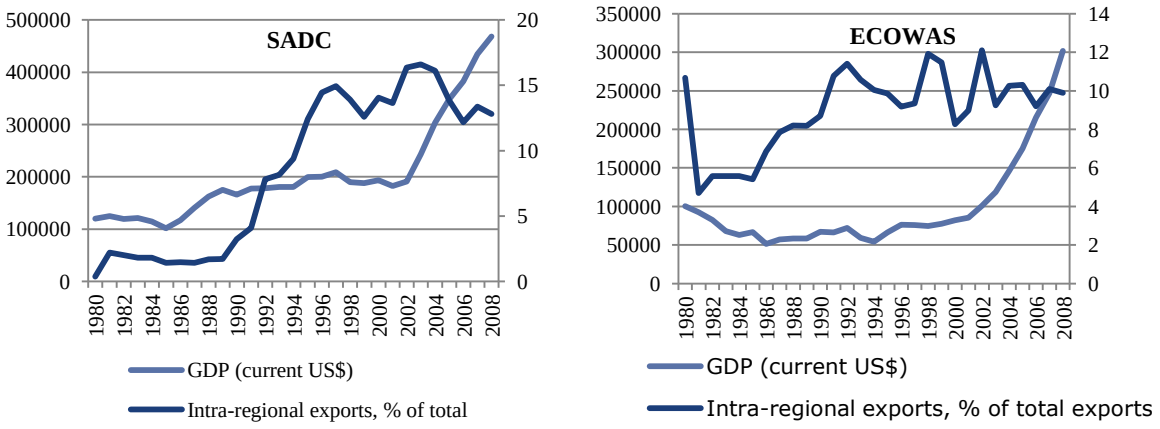
Figure 6: Composition of exports from SSA RECs in 2008



Source: Adapted from UNCTAD 2009b.
Note: Countries included within each REC for each year are not known.

ECOWAS exports' protracted concentration in fuels, which are more subject to the vagaries of international markets and less conducive to dynamic gains, may be partly responsible for its more erratic as well as sluggish increases in intra-regional trade. In the following sub-sections we identify which countries within each REC account for the largest shares of intra-regional trade and analyse their structural characteristics in more detail. Suffice it to say here that in terms of the role of economic growth as a driver of intra-regional trade, and vice versa, there is no correlation between gross domestic product (GDP) and intra-regional exports in ECOWAS. In comparison, a stronger positive association is apparent in SADC (see Figure 7). These results do not however, indicate causality.[10]

Figure 7: GDP (US$ million) and intra-regional exports in SADC and ECOWAS



Source: World Development Indicators; UNCTAD 2009b.

[10] The coefficient of determination for SADC is 0.38 which suggests that 38% of the variation in one variable may be explained by the variation in the other (compared to 0.5% for ECOWAS). There is no correlation between GDP and intra-regional exports in ECOWAS (0.23), but a strong positive association in SADC (0.6). It is beyond the scope of this report to explore the drivers of growth in more detail. See Tables A and B, Appendix 2 for *per capita* GDP data.

1.3.1 ECOWAS

ECOWAS seeks to promote regional political co-operation and economic integration, with the aim of eventually establishing an economic union among West African countries. The treaty which established ECOWAS was signed in Lagos, Nigeria, on 28 May 1975 and came into force on 20 June 1975. ECOWAS comprises most of West Africa and is designated as one of the five regional pillars of the AEC, together with Common Market for Eastern and Southern Africa (COMESA), the Economic Community of Central African States (ECCAS), the Intergovernmental Authority on Development (IGAD) and SADC; ECOWAS signed the Protocol on Relations between the AEC and RECs in February 1998.

Although ECOWAS states as its objective the creation of a full economic union, it already includes one functioning CU – WAEMU, which became operational in 2000. The region is also divided by two currencies: the *Communauté Financière Africaine* (CFA) zone, which encompasses WAEMU, and the West African Monetary Zone (WAMZ). Membership of ECOWAS has remained stable in recent years with only one new entrant (Cape Verde in 1977) and one withdrawal (Mauritania in 2002). There are currently 15 members.[11]

Yang and Gupta (2007) point out that, despite increases, intra-ECOWAS trade has risen erratically relative to trade with RoW and shows no obvious trend over time, except perhaps within WAEMU - the largest sub-group within the region. They argue that this is due to the improved performance of the WAEMU CU – a model which the ECOWAS region is trying to emulate.[12] But they also point out that empirical evidence on the effectiveness of regional trade agreements in promoting intra-African trade is limited. Moreover they recognise that although some increases in intra-regional trade flows have been recorded, these are not large enough to confirm that intra-ECOWAS trade has been beneficial to *all* members. As shown in Tables 2 and 3, Côte d'Ivoire, Nigeria, and Ghana account for most intra-regional trade – in terms of both exports and imports – and their shares have remained fairly constant in recent years.

Table 2: ECOWAS intra-regional exports (% share)

Country	1980–84	1985–89	1990–94	1995–99	2000–4	2005–9
Benin	0.7	1	0.9	0.7	1.5	1.5
Burkina Faso	2.3	2.3	1.5	1.4	1	1
Cape Verde	0	0	0	0	0	0
Côte d'Ivoire	34.5	41	38.9	38.8	35.4	32.2
The Gambia	**1.4**	**0.5**	**0.6**	**0.1**	**0**	**0**
Ghana	**3.2**	**2.3**	**7**	**4.6**	**3.1**	**3.3**
Guinea	**0.2**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**
Guinea-Bissau	0.1	0.1	0.1	0	0.2	0.5
Liberia	1.1	0.4	0.1	0.2	0.3	0.2
Mali	4.5	3.3	0.6	0.3	0.2	0.1
Niger	6.1	2.4	3.4	2.8	2.5	1.8
Nigeria	**31.4**	**35.4**	**39.1**	**43.3**	**41**	**44.7**
Senegal	10.2	9.1	5.1	6.4	8.9	8.9
Sierra Leone	**0.1**	**0.1**	**0**	**0**	**0.2**	**0.1**
Togo	4.1	1.9	2.4	1.2	5.2	5.1

Source: IMF Direction of Trade Statistics

Note: WAMZ members are presented in **bold**. All other countries except Cape Verde and Liberia are members of WAEMU.

[11] Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

[12] Besides the establishment of an integrated internal market for goods and services free of tariffs and NTBs, the ECOWAS CU project also requires its member countries to agree on a CET to be applied to imports from outside the region.

There has been no major change in the level of intra-regional exports in ECOWAS over the period 1990-1999 compared to 2000-2009. However, in relation to imports, there is a significant increase in intra-regional imports over the period 1990-1999 compared to 2000-2009.

Table 3: ECOWAS intra-regional imports (% share)

Country	1980–84	1985–89	1990–94	1995–99	2000–4	2005–9
Benin	2.6	4	1.4	3.9	5	4.2
Burkina Faso	8.5	9.7	6.8	6.9	6.8	6.9
Cape Verde	0.1	0.2	0.5	0.2	0.2	0.2
Côte d'Ivoire	15	31.3	27.7	24.9	23.6	27
The Gambia	**0.6**	**0.8**	**1.5**	**1**	**1.9**	**2**
Ghana	**25.8**	**14**	**17**	**26.7**	**20.8**	**23.2**
Guinea	**0.6**	**1.5**	**5.5**	**3.1**	**3.2**	**1.8**
Guinea-Bissau	0.4	0.5	0.4	0.4	0.9	0.6
Liberia	1.7	0.8	0.9	1	1.3	1.1
Mali	12.1	9.2	9.6	10.9	9.7	9.1
Niger	10.8	8.8	4.7	3.5	3.9	2.9
Nigeria	**4.6**	**3**	**7.2**	**8.1**	**9.5**	**12.5**
Senegal	9	10.6	7.3	5.3	9.6	4.6
Sierra Leone	**4.1**	**3**	**6.8**	**2.3**	**1.9**	**2**
Togo	3.9	2.7	2.8	1.8	1.6	1.8

Source: IMF Direction of Trade Statistics
Note: WAMZ members are presented in **bold**. All other countries except Cape Verde and Liberia are members of WAEMU.

Indicators on regional trade intensity can help to explore whether or not the value of trade between two countries, or in this case, the region with its members, is more or less than would be expected given their exports to the rest of the world. It is calculated as follows: TIij = (xij /Xi)/ (xwj/Xw). That is, xij and xwj are the values of a country i's exports to the region, and the rest of the worlds exports to the region, respectively while Xi is country i's total exports and Xw world total exports. A value that is greater (less) than one indicates a trade flow that is larger (smaller) than expected based on the country i's importance in world trade. In terms of regional trade intensity for ECOWAS (Table 4), the share of regional exports has increased to a greater extent for some of the economically smaller members such as Togo, Sierra Leone, Senegal, Benin and Guinea-Bissau. However, in most cases regional import intensity has declined which suggests that imports from third party countries have increased to a greater extent than those from the region.[13]

Table 4: ECOWAS regional trade intensity indices

Country	Export intensity							Import intensity						
	1980	*1985*	*1990*	*1995*	*2000*	*2005*	*2009*	*1980*	*1985*	*1990*	*1995*	*2000*	*2005*	*2009*
Benin	0.1	0.0	0.4	0.1	0.1	0.3	0.4	0.1	-1.5	-1.5	-2.7	-1.7	-1.9	-3.7
Burkina Faso	0.7	0.2	0.2	0.4	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.5	0.5	0.5
Cape Verde	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Côte d'Ivoire	0.1	0.1	0.3	0.2	0.3	0.3	0.3	0.0	0.2	0.4	0.2	0.4	0.4	0.4
The Gambia	**0.4**	**0.2**	**0.0**	**0.3**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.3**	**0.2**
Ghana	**0.0**	**0.1**	**0.0**	**0.1**	**0.0**	**0.1**	**0.1**	**0.3**	**0.4**	**0.3**	**0.2**	**0.2**	**0.3**	**0.2**
Guinea	**-**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**0.2**	**0.1**	**0.2**	**0.1**	**0.0**
Guinea-Bissau	**0.1**	**0.2**	**0.0**	**0.0**	**0.0**	**0.2**	**0.5**	**0.1**	**0.0**	**0.1**	**0.0**	**0.2**	**0.3**	**0.2**
Liberia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Mali	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.7	0.2	0.4	0.3	0.3	0.3	0.3

[13] Regional import and export intensity figures are calculated based on value data.

Country	Export intensity							Import intensity						
	1980	*1985*	*1990*	*1995*	*2000*	*2005*	*2009*	*1980*	*1985*	*1990*	*1995*	*2000*	*2005*	*2009*
Niger	0.1	0.2	0.2	0.2	0.9	0.4	0.4	0.2	0.2	0.4	0.3	0.1	0.2	0.2
Nigeria	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**-**	**-**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Senegal	0.3	0.2	0.1	0.3	0.3	0.5	0.7	0.1	0.1	0.1	0.1	0.2	0.2	0.1
Sierra Leone	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**-1.0**	**0.2**	**0.7**	**0.2**	**0.2**	**0.1**	**0.2**
Togo	0.2	0.1	0.2	0.1	0.5	2.1	0.7	0.2	0.1	0.1	0.1	0.2	0.1	0.0

Source: IMF Direction of Trade Statistics

Note: WAMZ members are presented in **bold**. All other countries except Cape Verde and Liberia are members of WAEMU.

1.3.2 SADC

SADC, with a membership of 15 countries,[14] was originally conceived as a bulwark against apartheid South Africa and, by extension, the Southern African Customs Union (SACU).[15] SACU is not a Common Market, nor an Economic Union, but within it operates a Common Monetary Area (CMA) which comprises Lesotho, Namibia, South Africa and Swaziland (Botswana is not a member).[16] All members of SACU are also members of SADC.

The 1992 SADC Treaty changed a loose organisation of member state into a legally binding arrangement to facilitate closer economic integration between members and formed part of the continent's drive to harmonise RECs further to the establishment of the AEC in 1991. The SADC Trade Protocol was established in 1996, and since 2000 members have started to implement their commitments and an FTA was launched in 2008. Some SADC members also belong to other RECs, such as COMESA and the East African Community (EAC). There are increasing efforts to harmonise membership across these RECs, and between them, institutionally. These efforts are being driven regionally, but with some external pressure applied – most recently brought to bear in light of Economic Partnership Agreement negotiations with the European Union (EU). This section highlights trends in intra-regional trade flows within the SADC region across all members for which data are available.

As shown in Tables 5 and 6, the main regional driver of trade within SADC, in terms of both exports and imports, is South Africa. Its regional importance is much more pronounced as a source of other members' imports than as a destination for their exports. Angola is a lesser, but increasingly important regional partner in terms of its imports as well as its exports (which are concentrated in fuels); so too are the landlocked countries Zambia and Zimbabwe, whose shares of exports and imports increased steadily over the period 1980–2009.

[14] Angola, Botswana, Democratic Republic of Congo (DRC), Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, Swaziland, South Africa, Tanzania, Zambia, and Zimbabwe.

[15] It was created in 1910 as a revenue sharing mechanism for the tariffs paid on imports which had to travel across the borders of the land-locked countries Botswana, Lesotho and Swaziland from ports in South Africa. The agreement of sovereign states was signed in 1969 and entered into force in 1970, replacing the 1910 arrangement between Botswana, Lesotho, South Africa, and Swaziland (Namibia became the fifth member in 1990).The agreement was most recently revised in 2002 in order to respond to the demands of its members related to revenue sharing mechanisms.

[16] Namibia officially joined in 1992, but had previously been a *de facto* member as a territory administered by South Africa, as noted in its most recent *Trade Policy Review* (2009). Although Botswana is not a member of the CMA it maintains a crawling band system based on a basket of the South African rand and the IMF's Special Drawing Rights.

Table 5: SADC intra-regional exports (% share)

Country	1980–84	1985–89	1990–94	1995–99	2000–4	2005–9
Angola	**0.9**	**1.1**	**1.1**	**3.6**	**7**	**6.6**
Botswana	*8.4*	*15*	*12.4*	*2.8*	*1*	*1.6*
DRC	**6.4**	**5.9**	**3.6**	**4.2**	**4.4**	**9.1**
Lesotho	*0.2*	*0.3*	*0.2*	*0*	*0*	*0*
Madagascar	**0.1**	**0.7**	**1.9**	**3.2**	**3.2**	**2.2**
Malawi	**5.9**	**6.8**	**9.5**	**8.6**	**6.8**	**4.4**
Mauritius	**0.8**	**1.5**	**2**	**6**	**6.1**	**3.4**
Mozambique	5.3	9.9	7.6	13	14.8	12.1
Namibia	*0.4*	*0.2*	*1.1*	*0.8*	*0.4*	*0.4*
Seychelles	**0.4**	**0.4**	**0.8**	**0.8**	**0.9**	**0.8**
Swaziland	***1.5***	***2.7***	***6***	***2.1***	***1.1***	***0.8***
South Africa	**48.3**	**37.9**	**39.6**	**23.4**	**18.3**	**25.2**
Tanzania	2.6	2.8	2.5	4.6	6.1	5.1
Zambia	**9.6**	**12.5**	**9.3**	**11.1**	**13.8**	**14.4**
Zimbabwe	**10.8**	**5**	**8.3**	**18**	**17.2**	**14.7**

Source: IMF Direction of Trade Statistics
Note: **Bold** = member of COMESA; *Italic* = member of SACU; Underlined = member of EAC.

Despite recent growth in intra-regional exports for SADC, there has been no significant change in the level over the period 1990-1999 compared to 2000-2009. This is also the case for intra-regional imports, for the same period.

Table 6: SADC intra-regional imports (% share)

Country	1980–84	1985–89	1990–94	1995–99	2000–4	2005–9
Angola	**0**	**0**	**0**	**0.2**	**1.3**	**12.3**
Botswana	*4*	*8.1*	*3*	*1.1*	*1.2*	*1.1*
DRC	**0.2**	**0.4**	**1.2**	**0.2**	**0.7**	**1.3**
Lesotho	*0*	*0*	*0*	*0*	*0*	*0.1*
Madagascar	**0.1**	**0.5**	**1.3**	**0.8**	**0.8**	**0.3**
Malawi	**2.6**	**1.4**	**0.6**	**1.7**	**1.6**	**1.6**
Mauritius	**0.2**	**0.4**	**0.8**	**1.9**	**1.6**	**1.4**
Mozambique	2.2	0.3	0.5	1.2	3.2	3.2
Namibia	*0*	*0*	*0.2*	*0.3*	*0.3*	*0.3*
Seychelles	**0.1**	**0.1**	**0**	**0**	**0.4**	**0.4**
Swaziland	***0.2***	***0.1***	***0.1***	***0***	***0***	***0***
South Africa	**74.8**	**69.3**	**80**	**80.7**	**72.4**	**58.9**
Tanzania	0.9	0.9	0.6	0.9	1.6	1.8
Zambia	**5.4**	**4.2**	**2**	**3**	**5.2**	**8.9**
Zimbabwe	**9.3**	**14.4**	**9.8**	**7.9**	**9.9**	**8.5**

Source: IMF Direction of Trade Statistics
Note: **Bold** = member of COMESA; *Italic* = member of SACU; Underlined = member of EAC.

In terms of regional trade intensity, as expected the landlocked countries of the region such as Zambia and Zimbabwe have a high degree of dependence on regional partners for both exports and imports. It may be the case that goods in transit may be recorded as if they are destined or originating from some member countries particularly South Africa (which has many major ports serving landlocked countries). The region generally is more important as a destination for its members' exports than as a source of their imports (Table 7). However, contrary to trends apparent in ECOWAS, the levels of imports sourced from regional partners have held up in recent years compared to RoW (as indicated by regional import trade intensity). Zimbabwe, Malawi and Mozambique have the highest regional export intensity. Zambia, Zimbabwe and Mozambique have the highest regional import intensity.

Table 7: SADC regional trade intensity indices

Country	Export intensity							Import intensity						
	1980	*1985*	*1990*	*1995*	*2000*	*2005*	*2009*	*1980*	*1985*	*1990*	*1995*	*2000*	*2005*	*2009*
Angola	**-1.0**	**0.0**	**0.0**	**0.0**	**0.03**	**0.03**	**0.02**	**-**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**
Botswana	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DRC	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.4**	**1.2**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**0.1**
Lesotho	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Madagascar	**0.0**	**0.0**	**0.0**	**0.1**	**0.2**	**0.3**	**0.2**	**0.0**	**0.0**	**0.2**	**0.0**	**0.1**	**0.0**	**0.0**
Malawi	**0.0**	**0.1**	**0.2**	**0.2**	**1.5**[b]	**2.2**	**2.1**	**0.1**	**0.1**	**0.0**	**0.1**	**0.1**	**0.3**	**0.1**
Mauritius	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.2**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**
Mozambique	-1.0	0.2	0.2	0.5	-1.9	1.6	1.6[a]	-1.0	0.0	0.0	0.1	0.1	0.1	0.2[a]
Namibia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seychelles	**0.2**	**0.0**	**0.4**	**0.2**	**0.5**	**0.4**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**
Swaziland	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
South Africa	**0.0**	**0.0**	**0.0**	**0.02**	**0.02**	**0.03**	**0.04**	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Tanzania	0.0	0.0	0.0	0.1	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Zambia	**0.0**	**0.1**	**0.2**	**0.1**	**1.5**[b]	**1.2**	**1.4**	**0.0**	**0.1**	**0.0**	**0.1**	**0.1**	**1.0**	**0.3**
Zimbabwe	**-1.0**	**0.0**	**0.1**	**0.0**	**0.3**	**3.5**	**3.0**	**-**	**0.1**	**0.1**	**0.1**	**0.2**	**0.3**	**0.2**

Source: IMF Direction of Trade Statistics

Note: **Bold** = member of COMESA; *Italic* = member of SACU; Underlined = member of EAC; (a) 2008 data; (b) 2001 data

1.4 Potential for intra-regional trade – structural analysis

There are two main areas in which to look in order to try to explain variations in intra-regional trade flows. The first relates to factor endowments and the propensity to import and export as *revealed* by comparative advantages. Its calculation requires trade data only; the trade flows reported themselves reveal countries' specialisation patterns and hence comparative advantage, though not the source of this advantage.[17] The second focuses more on the policy environment and the extent to which trade flows are influenced by tariffs and NTBs. This section focuses on the first area. It explores the structural characteristics of trade flows for ECOWAS and SADC. It does this by making use of indices for identifying trade complementarities and comparative advantages. The following section focuses on the second area and explores the impact of policy barriers such as NTBs on intra-regional trade flows, in much more detail.

The approach to assessing the potential for intra-regional trade first, and then by extension how this potential may be constrained by the imposition of NTBs, could be considered similar to the export diversification approach.[18] As previously discussed, traditional and newer contributions to theory suggest that low income countries should seek to form RTAs with other countries whose export baskets are more diversified than their own in order to have more success in their efforts to maintain and benefit from such agreements. The literature is much less sanguine in relation to RTAs between low income economies which have very similar export bases, unless the potential for intra-industry trade exists.[19]

[17] As de Benedictis and Tamberi (2001) argue, the greater independence of measurement from theory implies more freedom in the selection of the specific index of RCA to use in applied research on international specialisation issues, but it also requires greater awareness of the implications of that selection.

[18] See Yang and Gupta (2007). Also Yeats (1998) who, with reference to Mercosur, argues that if members of an RTA have to rely heavily on third countries for a high share of their key imports, and as destinations for their major exports, this may reduce their commitment to the RTA.

[19] It is important to note, however, while the theoretical literature on regionalism is well developed, the empirical literature is still maturing (see Freund and Ornelas, 2010).

Some have argued that because exports from countries in SSA tend to be highly concentrated in a few primary products, many of which are not important imports in other African countries, that this limits the potential gains from any RTA between them. Others argue that despite similar export baskets, regions such as ECOWAS, and indeed SADC, possess large enough regional markets for domestic producers to utilise and subsequently launch out from as a strong competitive force to other regions of the world. As in other parts of the developing world, the experience of West Africa with formal regional integration has been largely driven by the desire to overcome the constraint of small economic size, which can hamper countries' ability to industrialise efficiently, by extending the logic of protected and state-led economic development to a larger number of countries (Aryeteey, 2002).

As argued by Foroutan (1993) simply saying that removing barriers to trade, including non-tariff barriers, will not have any effect if partners do not demand each other products misses the potential for trade based on economies of scale, product differentiation and intra-industry trade. Moreover, ignores the objectives of fostering closer economic integration: to alter existing patterns of production by taking advantage of a larger market, fostering development of new industries, relocating others and increasing the output of existing ones.

We first explore the RCAs of each region and their individual members and attempt to reconcile with recent trends in intra-regional trade flows in ECOWAS and SADC. To capture the degree of trade specialisation of a country Balassa (1965) suggested the following index of RCA.

$RCA = (x_{ij}/X_i)/(x_{aj}/X_a)$

x_{ij} = exports of product *j* from country *i*.

X_i = total exports from country *i*.

$x_{a\,i}$= total exports of product *j* from the reference area (e.g. the world).

X_a = total exports from the reference area.

A country, or region, reveals its comparative advantage in specific products when the RCA indicator scores higher than 1; this shows that its exports of a specific product are more than expected on the basis of comparison to the reference area, usually the rest of the world. Despite recent extensions to the RCA indicator, for example by Hausmann and Klinger (2006), this section focuses on the building blocks of approaches and simply applies the index developed by Balassa (1965) to trade flows within the selected regions and for their members.[20]

1.4.1 RCA and trade complementarity in ECOWAS

The first step in the structural analysis of trade flows from the ECOWAS region was to explore growth in and across product categories at the HS 2-digit level. The full results for the region are presented in Appendix 3, which shows how the composition of the region's top exports and imports has remained steady in recent years, with no change in patterns discernible. The total value of exports from ECOWAS to RoW has increased in recent years, but this growth has mostly been accounted for by increases in the value of existing exports, such as mineral fuels and oils[21] which are dominated by flows from Nigeria (Figure C,

[20] Vollrath (1991) extended the RCA indicator and applied the same formula to imports. As summarised by Shirotori et al. (2010), he also amended the formula in two further ways; the first in order to avoid double counting, and the second so as to encompass both import and export aspects of comparative advantage. The indicator has also recently been extended further by the product proximity literature (Hausmann and Klinger, 2006). It is beyond the scope of this study to review these two measures in more detail with respect to the selected regions and countries.

[21] See Figure 2.

Appendix 3). Levels of intra-regional trade, in comparison, have remained stable but low (Figure D, Appendix 3). The results of region's RCA for all products identified with an RCA of more than one in 2008 are presented in Table 8 for the period 2000–2008. In terms of the region's RCA compared to rest of the world, it is highest for cocoa and mineral fuels – the region's top exports. But cotton, a 'top ten' *import* also features.

Table 8: RCA indicators for ECOWAS and rest of the world

HS	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
01	Live animals	1.3	2.9	2.0	2.0	6.3	4.6	1.0	1.3	1.3
08	Edible fruit and nuts	1.4	1.6	1.5	1.7	6.0	4.8	1.4	1.4	1.2
13	Lac; gums, resins	0.2	0.2	0.3	0.2	0.6	0.5	7.8	3.6	2.0
14	Vegetable plaiting materials	3.1	0.7	0.1	0.6	4.5	7.0	1.6	1.1	1.6
18	Cocoa and cocoa preparations	21.2	29.5	36.3	34.3	108.3	91.4	21.7	25.0	19.7
27	Mineral fuels, oils	7.7	7.3	7.2	6.8	1.1	1.2	5.8	5.8	5.3
33	Essential oils & resin oils	0.5	0.6	0.7	0.5	2.0	1.6	0.4	0.5	1.1
41	Raw hides and skins	0.1	0.3	0.2	0.2	0.3	0.3	0.5	2.2	3.7
46	Manufactures of straw, other plaiting materials	1.2	3.1	1.2	1.2	3.6	4.2	0.6	1.0	1.0
52	Cotton	3.8	4.0	4.8	6.0	18.3	14.2	2.6	1.8	1.4
71	Precious/semi precious stones/metals	1.5	2.7	1.7	2.2	3.0	7.0	1.7	2.1	1.8

Source: Derived from data obtained from UN COMTRADE database.
Note: Based on available data.

The RCAs for each member of ECOWAS at the HS 2-digit level are identified in Table C, Appendix 3. The results for ECOWAS suggest that RCAs tend to be clustered amongst traditional commodity exports such as tobacco, salt, ores, slag, ash and precious metals. These products are generally considered to embody less of a potential to sustain trade dynamism in the form of technology, learning and other spillover effects. More non-traditional, or newer, products such as edible vegetables, fruit and fish also feature as common sources of advantage across members. Although such goods may be 'newer' than other more traditional commodities, they are generally considered to be less sophisticated compared to other types of light manufactures with less of a potential to sustain trade dynamism. But more sophisticated than other types of traditional commodities, for example, because they are supplied to customers 'just-in-time' and must comply with more stringent product and process standards.

Trade complementarities

The trade complementarity index is a measure of potential trade between two partners.[22] It compares the export basket of country *k* to the import basket of country j and is constructed as follows:

$$TC_{ij} = 100*(1- \sum_{i=1} (|m_{ik} - x_{ij}| / 2))$$

Where x_{ij} is the share of good *i* in global exports of country *j* and m_{ik} is the share of good *i* in all imports of country *k*. Positive values up to 100 indicate the extent to which the exports of country *i* match the imports of country *j*; when values are less than zero and negative, export and import shares differ greatly, which suggests a limited potential for intra-regional trade, based on the logic of this index.

Results for ECOWAS and its sub-regions WAMZ and WAEMU have recently been calculated by Goretti and Weisfeld (2008) and are summarised in Table 9.[23] The complementarities between WAEMU countries as

[22] See Shirotori and Molina (2009).

exporters and other ECOWAS countries as importers are as high as 29% – which exceeds the reference point of 25% considered to indicate a strong potential for enhancing trade. These results suggest that the trade complementarities between ECOWAS countries are substantial. Thus, even though ECOWAS members' RCAs for exported goods tend to be clustered within similar products based on similar factor endowments, export baskets differ enough from other members' imports to suggest the potential for intra-regional trade according to logic which underpins the index.

Table 9: Trade complementarities index in ECOWAS

		Exporter														
		WAEMU								Non-WAEMU						
Importer		Benin	Burkina Faso	Côte d'Ivoire	Guinea-Bissau	Mali	Niger	Senegal	Togo	*WAEMU*	Cape Verde	The Gambia	Ghana	Guinea	Nigeria	Sierra Leone	*Non-WAEMU*
WAEMU	Benin	...	27.1	43.1	...	31.0	27.0	48.9	43.0		34.7	26.3	21.2	8.0	16.5	7.7	*19.1*
	Burkina Faso	17.4	...	35.7	...	24.8	15.9	50.3	33.6		38.2	19.4	17.8	8.0	24.0	8.4	*19.3*
	Côte d'Ivoire	18.1	19.0	...	...	25.6	15.9	56.9	33.1		40.7	23.6	24.8	10.8	23.9	8.3	*22.0*
	Guinea-Bissau	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
	Mali	14.0	17.1	37.2	...	...	13.8	49.5	36.4		37.6	18.7	18.7	9.9	22.3	9.4	*19.5*
	Niger	24.5	26.2	41.8	...	28.7	...	50.2	37.4		31.9	32.2	21.7	9.6	16.5	9.0	*20.2*
	Senegal	19.9	21.7	38.9	...	26.3	15.9	...	36.3		37.4	21.5	21.6	10.7	23.9	9.2	*20.7*
	Togo	19.3	21.9	38.5	...	23.9	20.4	51.6	...		40.9	24.9	20.7	8.4	22.9	7.5	*20.9*
	WAEMU									...	*37.4*	*23.8*	*20.9*	*9.3*	*21.4*	*8.5*	*20.2*
Non-WAEMU	Cape Verde	21.6	20.7	34.9	...	26.2	16.7	35.2	40.6	*28.0*	...	24.0	23.9	9.4	10.1	10.4	
	The Gambia	21.9	25.0	38.5	...	25.6	23.1	43.7	37.6	*30.8*	27.5	...	22.4	11.0	14.5	10.3	
	Ghana	18.6	20.2	39.3	...	26.2	18.4	47.8	35.2	*29.4*	32.2	24.7	...	11.7	15.4	8.5	
	Guinea	19.5	21.9	37.2	...	25.6	18.4	51.2	35.9	*30.0*	38.5	24.2	18.1	...	23.8	8.6	
	Nigeria	14.4	17.1	29.9	...	24.4	15.0	38.9	37.9	*25.4*	25.5	20.8	23.1	12.3	...	9.5	
	Sierra Leone	24.6	25.1	37.6	...	27.3	17.1	47.0	37.1	*30.8*	53.2	20.8	18.7	7.7	41.7	...	
	Non-WAEMU	*20.1*	*21.7*	*36.2*	...	*25.9*	*18.1*	*44.0*	*37.4*	*29.0*							...

Source: Goretti and Weisfeld (2008).

Analysis of the trade complementarities of the sub-region of WAEMU by Goretti and Weisfeld (2008) also finds that with production patterns unchanged, the current level of intra-regional trade could be expanded marginally: from 11% of total trade to about 14%. They show how trade complementarities are highest for those economies with more diversified economic bases, such as Côte d'Ivoire and Senegal (also the economically larger members of ECOWAS; see Table B, Appendix 2). But less for the economically smaller members of ECOWAS, such as Benin, Niger, and Burkina Faso, that have average export complementarities indices of less than 25%.

1.4.2 RCA and trade complementarities in SADC

Growth in and across product categories at the HS 2-digit level is presented for those members of SADC for which trade data are available in Appendix 4.[24] It is clear that the export and import baskets of this region are more diversified than is the case for ECOWAS. Unlike ECOWAS, SADC is a large mineral fuels and oil importer; other important imports include general intermediate goods such as electronic machinery and plastics.

Since 2000 the region's exports have grown rapidly in terms of value (Figure G, Appendix 4). This growth has occurred fairly evenly across the region's top ten exports. Intra-regional trade flows have also increased

[23] Goretti and Weisfeld (2008) use the trade complementarity formula devised by Michaely (1996). This differs from that referred to by Shirotori and Molina (2009) in that it is not possible to obtain a figure of less than zero (zero means no products exported by country *i* are imported by country *j*). In comparison, the inclusion of 1- by Shirotori and Molina indicates the use of absolute values; negative values therefore indicate the extent to which exports by country *i* do not match the imports of county *j*.

[24] Unfortunately, this analysis excludes Angola and DRC because no trade data have been reported from 2000 to date – the period under analysis.

over the period 2000–8 (Figure H, Appendix 4). Exports to the world are dominated by South Africa, which in 2008 accounted for 74% of the region's reported total exports in value terms (Table D, Appendix 4).[25]

The SADC region has an RCA compared to rest of the world in a large number of products. Table 10 below presents the top ten product groups in which the region has been identified as having an RCA, some of which, such as live trees and other plants, edible fruit and nuts, tobacco, aircraft and parts, differ from the region's top ten exports (Table F, Appendix 4, presents other high-scoring products).

Table 10: RCA indicator for SADC and rest of the world

HS	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
06	Live tree & other plants; bulb, root	1.9	1.3	2.2	1.0	1.2	1.4	7.8	2.4	3.3	6.9
08	Edible fruit and nuts	4.5	3.5	3.9	4.2	4.7	4.4	3.7	3.9	3.9	5.3
24	Tobacco/manuf. tobacco substitutes	8.4	7.9	5.0	3.2	5.9	5.4	6.4	5.0	5.9	4.8
26	Ores, slag and ash	8.2	7.5	9.2	7.0	6.2	6.0	6.4	7.0	9.6	10.7
36	Explosives; pyrotechnic prod; matches	7.7	3.3	4.2	4.2	5.2	3.8	3.3	4.0	5.2	4.6
71	Precious/semi precious stones/metals	8.6	12.1	7.8	10.9	10.7	11.9	10.6	10.0	8.4	5.8
74	Copper and articles thereof	3.7	3.5	3.7	4.	3.1	3.7	4.3	4.2	4.0	6.9
75	Nickel and articles thereof	3.5	3.8	4.5	1.5	7.6	2.5	2.9	5.3	5.5	4.0
86	Railway locomotives/rolling stock, parts	10.7	9.4	10.3	8.2	7.6	6.6	8.6	8.0	7.4	8.8
88	Aircraft, spacecraft, and parts thereof	2.8	2.8	3.5	4.2	4.1	4.6	3.9	4.1	5.6	5.6

Source: Derived from data obtained from UN COMTRADE database.
Note: Based on available data.

The results for each member country are presented in Table G, Appendix 4. RCAs for SADC member countries tend to be clustered amongst similar products such as tobacco, salt, and ores, slag and ash. But articles of apparel feature, as do other types of light manufactured goods such as automotive parts. These products are generally considered to embody a greater potential for learning, technology and other spillover effects, if properly harnessed. Moreover, such products tend to be traded within production networks and as intermediate goods; they may therefore feature in countries' imports *and* exports.

Trade complementarities indices constructed for each member of SADC for which data permit are presented in Table 11. Despite the region having an RCA in more technologically sophisticated products compared to ECOWAS, the results of analysis of the complementarities of trade structures and therefore the potential for increased intra-regional trade in SADC appear less promising. The results suggest that only in the case of South Africa and, to a lesser extent Mozambique is the composition of exports conducive to increased intra-regional trade. This is because the products exported by these two countries are more similar to members' imports, which suggest that the potential trade between these countries and the rest of the region is high. However, for other members this is not the case because their export and import baskets differ greatly from each other, which suggests limited potential for increased intra-regional trade according to the logic which underpins the index.

[25] This excludes Lesotho and Swaziland.

Table 11: Trade complementarities index in SADC

	Botswana	Lesotho	Madagascar	Malawi	Mauritius	Mozambique	Namibia	Seychelles	Swaziland	South Africa	Tanzania	Zambia	Zimbabwe
Botswana		-56	-35	-61	-46	-53	-43	-52	-50	-59	-55	-53	-50
Lesotho	-50		19	-36	-5	15	-18	-66	-34	12	6	-36	1
Madagascar	-35	-60		-59	-41	-18	-21	-78	-43	-78	-17	-3	-7
Malawi	-61	-74	-41		-56	-9	-21	-79	-2	22	-2	-37	-16
Mauritius	-46	-59	-4	-48		16	9	-55	-36	32	14	32	-4
Mozambique	-53	-74	-30	-57	-54		-8	-76	-49	43	2	-32	2
Namibia	-43	-64	-28	-59	-36	6		-70	-31	40	-4	-25	-6
Seychelles	-52	-76	-19	-66	-45	16	11		-48	37	-5	-24	-17
Swaziland	-50	-61	-9	-37	-32	22	-8	-69		29	13	-30	-25
South Africa	-59	-70	-45	-72	-52	6	-16	-81	-44		-14	-35	-31
Tanzania	-55	-77	-48	-71	-59	7	-13	-82	-52	46		-31	-24
Zambia	-53	-79	-54	-78	-62	3	-8	-83	-35	39	-23		-26
Zimbabwe	-50	-77	-25	-51	-51	11	-12	-70	-39	36	-6	-23	

Source: Derived from data obtained from UN COMTRADE database.
Note: Data for Lesotho are 2004; Swaziland, 2006; Malawi, Namibia and Seychelles, 2008, all others are 2009.

It is important to note the limitations of using such a high level of aggregation (HS 2-digit level) to assess RCAs and how these are similar or differ across economies in each region. In addition to the constraints analysis at such a high level of aggregation imposes on analysis of trade complementarities: it means that differences between production structures at a much lower level of aggregation are not captured, when analysis at such levels may be needed to better assess the potential or not for intra-industry trade. Both indicators assume that all other variables remain constant, such as demand in world markets, and related policy. Even though a country may have a high (low) revealed comparative advantage index compared to the rest of the world, this should not be automatically interpreted as being beneficial (weak) without more in-depth, country and industry specific analysis. As the earlier discussion on theory suggested, it may be more beneficial for countries to seek to trade against their comparative advantages rather than with it.

2 The impact of non-tariff barriers on intra-regional trade

Section 1 presented and discussed recent trends and the structure of trade in SSA in general, and within ECOWAS and SADC, in particular. For these selected regions it explored what these patterns suggest in terms of the potential for intra-regional trade. This section sets out to identify the extent to which intra-regional trade flows within these regions are constrained by NTBs. It first introduces the different types of NTBs. It makes a clear distinction between NTBs and NTMs, the former is defined as an unnecessarily restrictive non-tariff measure (NTM) which affects trade in goods; the latter may affect trade in goods, but may be reflective of legitimate public policy purposes. It argues that key to making this distinction is an understanding of both the intent of the measure and resultant impacts on trade. The following sub-section introduces our methodological approach to quantitatively assessing the impact of reported NTBs on intra-regional trade for the selected regions.

2.1 Types and potential trade impacts of non-tariff barrier

Non-tariff barriers to trade may have similar effects to tariffs: they can increase domestic prices and impede trade to protect selected producers at the expense of other economic agents; they may also tax exports. Bhagwati (1965) has shown how both tariffs and NTBs can have equivalent effects when markets are competitive and therefore how the removal or reduction of NTBs can have similar effects to that of tariff reduction. Tariffs increase the costs for foreign suppliers while quotas and other types of NTBs serve to restrict the quantity of foreign-supplied goods in domestic markets; both may cause prices to increase in the domestic market. This in turn results in a decrease in economic welfare because of the distortion or wedge created between domestic and world market prices.

It therefore follows that the removal or reduction of NTBs on imports could, as in the case of tariff liberalisation, increase imports and therefore impact welfare through effects on local producers, domestic consumers and government revenues. These effects can be summarised as follows:

- Increased imports may displace domestic producers by foreign suppliers, depending on the assumed elasticity of substitution between imported and domestically produced goods;
- Consumers (and producers using imported inputs) may benefit from cheaper product prices; and
- Governments may lose revenues for the product liberalised, e.g. revenues from quota auctions or licences.

Deardorff (1987) notes that NTBs are preferred by policy makers because their effects are are more certain, direct and predictable than the effects of tariffs – competitors cannot overcome them easily. NTBs are usually held steady whilst market conditions change and are therefore rigid control measures. [26] Quotas are more palatable for voters given that they are not directly associated with a price increase. Governments may choose to exercise considerable discretionary power through the allocation of quotas, with divergent outcomes on the welfare of consumers and producers. These discretionary powers are kept in check through membership of multilateral institutions such as the WTO as well as other regional and bilateral trade regimes.

[26] The impact of a specific import duty compared to an ad valorem tariff can be vastly different if import prices fluctuate. It is also important to make the distinction between free on board (FOB) and cost, insurance and freight (CIF) values.

Based on the General Agreement on Trade and Tariffs (GATT), the definition of NTBs used by all WTO members includes export restraints, production and export subsidies, or measures with similar effect, not just import restraints. Other definitions of NTBs include *any* measure, public or private, that causes internationally traded goods and services, or resources devoted to the production of these goods and services, to be allocated in such a way as to reduce potential and real world income (Baldwin, 1970). This is clearly an extremely broad definition and obscures the fact that some NTMs may be used for legitimate public policy objectives, for example, in relation to health and safety concerns (SPS) and other technical regulations (TBT). Making the distinction between the intent and impact of a NTM is therefore crucial to determining the extent to which legitimate measures may serve as unnecessarily restrictive barriers to trade. That is, when a NTM serves to be a NTB.

2.1.1 Types of non-tariff barrier

Five types of policy barriers may be identified from the literature.[27]

- The first consists of quantitative restrictions (QRs) such as quotas and licences, which limit the volume or value of goods allowed across borders.
- The second consists of non-tariff charges on imports, such as variable levies, border tax adjustments or countervailing duties.
- The third includes government participation in trade, such as the use of subsidies, procurement policies and competition policy.
- Fourth are customs procedures, clearance, and classification procedures.
- The last category includes technical barriers to trade (TBT), such as packaging and labelling and health and sanitary regulations.

These barriers may be generic or product specific. For example, the former category could include NTMs that all goods must adhere to, such as customs, administrative entry and passage procedures, but which are implemented in a way that makes them unnecessarily trade restrictive. In comparison product specific barriers may result from the application of technical quality standards which on application tend to be more trade restrictive than facilitative.

Even though measures may be generic, or product specific, in terms of their application, the consequent impact of them on trade flows, and as a result economic welfare, may differ markedly. For example, a direct quantitative restriction (QR) which covers whole industry will cause the import demand curve to become vertical at the permitted quantity. In comparison, an industrial standard which adds a fixed cost to each unit of a good imported may cause the demand curve to turn downward and become steeper.[28]

This means that in addition to the consideration of price and quantity effects, the responsiveness of demand and supply as indicated by product and income elasticities becomes important: the extent of responsiveness may differ across markets, producers and consumers, even if the reported NTB is the same in each. This is because NTBs may have much more uncertain as well as highly variable impacts on prices and quantities and therefore what is demanded as well as supplied. Additional uncertainty results from the very nature of the imposition of NTBs: how does one know when an import surge may result which warrants the use of an NTB?[29] Because of these variable affects, some authors prefer to classify NTBs

[27] The following categories are used in the UNCTAD TRAINS database.

[28] See Deardorff and Stern (1998),

[29] This is known as the endogeneity problem, which we try to address in the empirical analysis we undertake.

according to their *intent* and *impact*.[30] This means that once NTBs have been identified by traders and defined, the challenge is to *measure* their impact on trade so as to analyse the welfare impact of their removal, reduction or harmonisation.

2.1.2 Measures of non-tariff barriers

Approaches to measuring NTBs range from: frequency-type inventories, based on counts of observed NTMs in particular countries, sectors, and types of trade; price comparison measures (tariff equivalents); and quantity impact measures based on estimation of trade flows in the absence of the measure.[31] Each approach has its own drawbacks.[32] Here we briefly summarise the pros and cons of using different frequency type inventories of NTBs in the analysis of welfare impacts.[33]

Measures of frequency

UNCTAD's TRAINS database uses a classification of over 100 trade measures, including those with a discretionary or variable component. It contains NTBs reported for over 150 countries from 1988 to 2001. Since 2006 it has included data on anti-dumping measures. The incidence of reported NTBs, either as a count or as a percentage of coverage of specific product lines (HS or Standard International Trade Classification (SITC)), is categorised as follows:

- Price control measures, such as multiple exchange rates, or foreign exchange allocation;
- Finance control measures, such as anti-dumping or countervailing measures, relating to credit allocations;
- Quantity restrictions, such as non-automatic licensing, quotas;
- Monopolistic measures;
- Technical Measures, such as regulations and customs procedures; and
- Miscellaneous, such as subsidies.

The database does not include any measures related to:

- Corruption;
- Export related measures;
- Government procurement;
- Intellectual property rights; or
- Other investment related measures.

This database which is country as well as commodity specific is one of the most detailed available. However, like most inventories, it is only as good as the data that are provided to it. The main source of information used in the database is taken from GATT notifications and other government publications, as

30 See Laird and Vossenaar (1991).

31 Deardorff and Stern (1998) also make reference to measures of equivalent nominal rates of assistance.

32 See Bora et al. (2002) for a more detailed overview of these.

33 Box 1 Appendix summarises some of the other approaches.

well as WTO TPRs. Although it is able to register a fairly wide range of NTBs, most of those listed fall within the Technical Measures category[34].

Other sources similar to UNCTAD TRAINS, which also take an 'inventory' or frequency approach to measuring the extent of NTBs, include the World Bank's Trade Restrictiveness Index (TRI), which seeks to measure the effectiveness of protection. It is constructed based on UNCTAD TRAINS data and includes four types of NTBs: 1. Quantitative Restrictions (QRs); 2.Voluntary Export Restraints (VERs); 3.Enforcement of decreased prices; and 4.Tariff quotas.

The difficulty with using frequency measures is that although they provide coverage on a range of restrictions, they are not able to capture their impacts or show differences in the intensity of their application. They c1an therefore only be used as a measure of the extent to which products (or countries) are subject to NTBs. They cannot be used to capture scale and/or growth effects. These limitations will obviously play out in our empirical analysis, which tries to quantify the impact of NTBs using TRAINS data. Bearing these caveats in mind, these data still allow us to analyse systematically the impact of NTBs on imports. More importantly, by comparing the effect of the same measure on different exporting countries we can largely avoid the problem of heterogeneity across measures and sectors.

2.1.3 Approaches to analysis of welfare impacts of NTBs

As the previous discussion has highlighted, NTBs may consist of several parameters, information about them is hard to collect and they are not straightforwardly quantifiable. This means that their economic impact is not easy to model (see Fugazza and Maur, 2008), and creates a number of methodological challenges for an empirical exercise which seeks to measure their trade impact. Despite these challenges, estimates as to the potential welfare impacts of NTBs can still help to provide information to policy makers to act to reduce or mitigate any negative impacts on producers or consumers that may result from their imposition. How do NTBs interact with intra-regional trade? Is there any differential impact of NTBs on regional partners *vis-à-vis* third parties? This information is particularly relevant for those regions seeking to foster deeper economic integration and enhance intra-regional trade flows.

According to Deardorff and Stern (1998), the one method of empirical analysis applicable to any kind of NTB is time-series analysis of the periods in which the NTB is in place, combined with observation of changes in prices or quantities of imports at the time of implementation. However, they also note that unless the implementation of the NTB comes as a complete surprise to the public, it is likely to have effects – perhaps perverse ones – long before it is put formally in place. Moreover, if some other event happens to affect trade simultaneously with the NTB, then this approach may give misleading information unless the importance of that other event is correctly diagnosed. We try to take account of some of these methodological concerns in the empirical analysis which follows in the next section which seeks to quantitatively assess the extent to which reported NTBs to UNCTAD TRAINs actually impact intra-regional trade.

2.2 Quantitative assessment of the effects of NTBs on intra-regional SSA trade flows: SADC

While NTBs are widely perceived to be an important constraint to trade in SSA, there have been limited attempts so far to systematically quantify their actual trade impact. For example, Kee et al. (2008) use UNCTAD TRAINS data to compute indices of trade restrictiveness for NTBs across countries. However as these indices are computed on the basis of the actual effects that these measures have on trade on one year for each country (which differs across countries), using them to estimate the effects of NTBs on trade

[34] In particular, the use of such indices would make the estimation endogenous.

would lead to biased estimations.[35] We take a different route and undertake a systematic evaluation of the actual impact of NTBs on the imports of selected SADC countries (HS 6-digit level) over a number of recent years. However, data limitations mean that our analysis is limited to the SADC region.

The idea is to perform a direct test by matching the NTBs recorded by UNCTAD, with corresponding import data. Because the NTBs reported to UNCTAD TRAINS have not actually been assessed in terms of their trade restrictiveness, and the evidence on the extent to which they actually constrain trade is not available, we use the term NTM to refer to them, until such time as we have the data to classify them as actual barriers to trade - NTBs.

We test whether imports in a sector where one or more NTMs are imposed at year *t* perform worse than those in sectors which do not experience an increase in NTMs, as well as whether they perform worse than in those periods when the NTM was not applied. It is worth noting that NTMs in our dataset are applied on products from all sources. That is due to the nature of NTMs, whose objective for instance is to protect consumers from possible animal diseases, thus making the selective application of an NTM according to the source of imports uncommon. More formally, we employ the following expression:

$$\Delta I_{ijst} = \alpha_{ijs} + \lambda_t + \beta ntm_{ist} + \varepsilon_{ijst} \qquad (1)$$

Where *ΔI* is the percentage change in imports of country i from exporting country j in sector s at time t; α is importer-sector-exporter fixed effects and λ is time effects; and *ntm* is a variable that captures non tariff measures (see below). The basic hypothesis we are testing is that β<0 in (1). As our interest lies mainly in the impact of NTMs on intra-regional trade, we test (1) separately for exporting countries belonging to SADC (i.e. $j \in SADC$ in (1)) and for the others (i.e. $j \notin SADC$ in (1)). In this way we examine whether NTMs are more or less of a constraint for intra-regional relative to extra-regional trade.

Importer-sector-exporter fixed effects allow control for time invariant characteristics that may influence imports, so as to focus on the determinants of the variation of these imports over time. Time effects capture any common (across sectors and countries) shock over time. Finally, imports over time can arguably be influenced by various time varying characteristics of the exporter country, such as: economic performance, other policies including tariff rates, cost of labour and so on. Part of what we are testing is exactly the extent to which NTMs are eventually binding for different exporters due to their different characteristics. Therefore we do not control for such features in our preferred specifications. However we do test the robustness of our results to the inclusion of exporter-time specific effects (the term σ below) which captures these characteristics by running the following augmented specification:

$$\Delta I_{ijst} = \alpha_{ijs} + \lambda_t + \sigma_{jt} + \beta ntm_{ist} + \varepsilon_{ijst} \qquad (2)$$

We undertake the analysis using the use the Generalised Methods of Moments (GMM) estimator.[36] As NTMs in our data are applied to all exporting countries indiscriminately, the potential differential impact in NTMs effects across countries can come either from traders different abilities to cope with the change in NTMs or to the sectoral composition of their exports to the importing country *i*. For example if country *j*'s exports to country *i* are particularly concentrated in product lines where the introduction of NTMs has a disproportionately negative impact on country *i*'s imports, then country *j*'s exports could be particularly negatively affected by NTMs even keeping traders abilities to cope with NTMs constant.

[35] In particular, the use of such indices would make the estimation endogenous.

[36] This is because one issue with estimating (1) and (2) is the likely endogeneity of the *ntm* variable. This could arise for instance if the decision to impose an NTM is driven by past trends in imports in that sector, or if it is related to the domestic performance in that sector. In such cases estimation via fixed effects would generate a biased coefficient.

2.2.1 Data

We use two sources of data: UNCTAD TRAINS for data on NTBs and UN COMTRADE for import data. We are limited by a lack of data availability for both ECOWAS and SADC regions, and countries within them, and years we are able to consider. In particular, only a handful of countries in SSA, mainly from Southern Africa, have relatively recent systematic data on NTBs. UNCTAD reviewed NTBs in four such countries (Botswana, Namibia, South Africa and Swaziland) in 2006. We gather the data for SADC from TRAINS and produce time-varying country-specific datasets on NTBs at the HS 6-digit sectoral level. NTM data on two further SSA countries (Nigeria and Senegal) are available for the year 2001 which means we are unable to undertake further analysis for ECOWAS.

Due to the nature of the NTB reporting, sometimes it is not known whether a measure applies to each 6-digit sector or not. For instance a measure can be listed as applying to HS 02 but with a 'partial coverage indicator', implying that the measure does not cover *every* 6-digit code within the 2-digit chapter (see Table 12 for an example of such recording in the case of South Africa). We therefore include that particular measure in the 'NTM partial coverage' variable. The rest of the measures shown in the example in Table 12 are included in the 'NTM full coverage' variable. The sum of the two is the 'NTM any coverage' variable.

For each of these coverage types, we generate in turn two different variables: a dummy with a value of zero for any sector-year in which there was no NTB in place (and one otherwise), and a continuous numerical variable with the number of measures affecting the sector in every year. We consider the measure recorded in each line as starting in the year indicated if its application started within the first six months of the year (such as in the case of the 'labelling requirements to protect human health' measure in Table 12), or in the following year if otherwise (e.g. the third measure 'Product characteristics requirements' in Table 12). By summing all the measures in each 6-digit sector in each year, we are thus able to generate time-varying sector-specific NTM variables for each of the four reporting countries in SADC.

Table 12: Example of the recording of NTMs from UNCTAD TRAINS

Product code	Measure name	NTM code	Start year	Start month	Partial coverage indicator
02	Labelling requirements to protect human health	8131	2004	3	NO
02	Prior authorization to protect human health	6171	2003	3	NO
02	Product characteristics requirements	8110	1997	10	YES
02	Seasonal prohibition	6330	2003	3	NO

Source: UNCTAD TRAINS.

The NTM data are recorded only once by UNCTAD in 2006.Thus the measures reported are those which were still in place in 2006 (regardless of the starting year), but not those that may have been applied for a period of time and expired before 2006. For instance a measure may have been applied only between 1998 and 2002. If we considered the period 2000-6, we would not have captured that measure although it would have affected imports in 2000-2. By constructing the dataset for 2003-6 only, we minimise the extent to which this potential missing information is present in the data.[37]

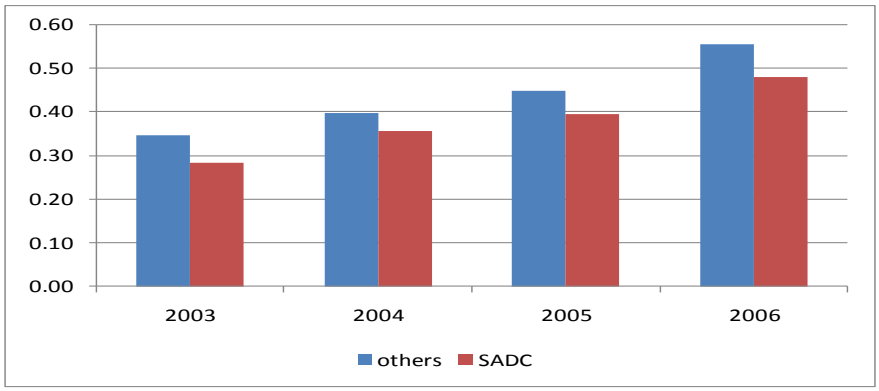
We then match the NTM data with bilateral import data (in current thousands of US dollars) at the HS 6-digit sector level.[38] One interesting question to explore is to what extent SADC and non-SADC exporters to these four countries are differently exposed to NTMs. As we said, NTMs are applied at the product level to

[37] Our data are still subject to a potential bias to the extent that measures were in place during part of that period and then ended before 2006. Given the pattern of application of NTMs, this is however likely to be a minimal bias.

[38] A further note of caution with the data concerns the fact that some of the NTMs are recorded at the 8-digit level thus making the matching with import data imprecise in some cases.

all exporter countries indiscriminately, so the eventual difference in the exposure by exporter would come from the sectoral composition of its exports to the four countries considered. The evolution in the average number of NTMs per HS 6-digit sector suggests that non-SADC exporters have been exposed to a higher level of NTMs, but in relative terms the average number of NTMs has grown faster for SADC than for non-SADC exporters (Figure 8).[39]

Figure 8: Average number of full coverage NTMs per H6-sector, SADC vs other exporters



Source: Authors' elaboration on UNCTAD TRAINS and UN COMTRADE.

2.2.2 Results

Table 13 presents summary statistics for the main variables used in the quantitative analysis for SADC. The information on the NTM variables shows that there can be as many as ten different NTM-related trade restrictions applying to a specific sector.

Table 13: Summary statistics of the main variables used in quantitative analysis for SADC

	Mean	Std. Dev.	Min	Max	Obs
SADC	0.169	0.375	0	1	843,808
NTM (any coverage)	1.277	1.626	0	10	843,808
NTM (full coverage)	0.421	0.591	0	9	843,808
NTM dummy (full cov.)	0.379	0.485	0	1	843,808
Bilateral Imports	257	8,414	0	3,256,453	843,808
Ln(Bil. Imp. + 1)	1.551	2.232	0	14.996	843,808
Ln(Bil. Imp.)	3.222	2.337	0	14.996	385,808
Δ Imports (%)	0.073	1.403	-13.240	12.734	636,008

Table 14 presents the results of running (1) using the NTM variable with full coverage across three different samples, according to the trading partner considered:

- full;
- SADC only; and
- non-SADC.

[39] Figure I Appendix presents bound and applied tariffs across SADC members. It is beyond the scope of this study to analyse the relationship between reductions in tariffs and frequency of reported non-tariff barriers in SADC.

The results from the GMM estimation strategy are summarised in Table 14. The NTM coefficient for the entire sample is negative although not significant (column 4). This is a somewhat a surprising finding. In contrast to the conventional wisdom, we do not find that NTMs significantly constrain imports in the four countries included in the sample. On the other hand, the NTM dummy is negative and highly significant for the SADC sample (column 5), while it is positive and significant for the non-SADC regression (column 6).

This suggests that the introduction of one or more NTMs in a sector severely penalises imports from other SADC countries in that sector (intra-regional trade) to the benefit of non-SADC countries, whose exports to the reporter increase.[40] The coefficients indicate that when a Southern African country included in the sample imposes at least one measure on a sector, the growth rate of its imports from other SADC countries drops on average by 200%, while the growth rate of its imports from non-SADC countries rises on average by 23%. In other words, to the extent that NTMs divert imports away from regional towards non-regional partners, their establishment seems to stifle intra-regional trade.

As the NTMs we are analysing are applied at the product level irrespective of the source country, this differential impact of NTBs can be due to two main causes: first, SADC countries could be on average much less able to adjust to NTBs than the other exporters to the Southern African region; second, SADC exports could be concentrated in product lines where NTMs are particularly effective in constraining imports. We test the latter hypothesis by introducing in the GMM regression a series of interaction terms between the NTM variable and dummies for the major sectoral groupings.[41] We present the results in columns (7) and (8) in Table 14. The negative and insignificant coefficient for non-SADC countries suggests that the differential impact of NTMs across sectors is compensated by the entire positive effect of NTMs on imports from non SADC countries.

Further analysis suggests that around 43% of the differential impact of NTMs between SADC and non-SADC countries is accounted for by a composition effect, i.e. exports of SADC countries are concentrated in sectors which are relatively more affected by NTMs.[42] This is particularly the case for agro-industrial sectors, where the NTMs have a more negative impact than in the other sectors. These results suggest that the majority of the NTMs' differential impact between SADC and non-SADC countries (i.e. 57%) is accounted for by the different ability of exporters to adapt to the introduction of a NTM. In order to check the robustness of these results we undertook a number of further tests. These are summarised in Box 2 Appendix.

Table 14: The impact of NTM on imports in Southern Africa, 2003-6

	(4)	(5)	(6)	(7)	(8)
	All	**SADC**	**Non SADC**	**SADC**	**Non SADC**
NTM dummy (full coverage)	-0.055	-2.099***	0.236***	-1.523*	-0.162
NTM dummy (full coverage)	(0.078)	(0.268)	(0.081)	(0.897)	(0.292)
Year effects	YES	YES	YES	YES	YES

[40] The results seem to be sound as confirmed by the results of a Sargan over-identification test.

[41] In particular we create six main groups of sectors which should represent similar aggregation to 1-digit type of sectors, but the results are similar for slightly different HS aggregations (see Table H, Appendix 5 fore results and Table I for the sectoral classifications used). One caveat is in order in that other more precise aggregations, such as two-digit ones, could yield different results. However such aggregations would imply a much larger number of additional interaction terms, thus making the computation of the results problematic.

[42] Using point estimates to compute the difference in NTMs' impact between SADC and non-SADC countries.

	(4)	(5)	(6)	(7)	(8)
	All	**SADC**	**Non SADC**	**SADC**	**Non SADC**
Importer-product-exporter effects	YES	YES	YES	YES	YES
NTM x Sector dummies	NO	NO	NO	YES	YES
Observations	428,208	76,500	351,708	76,500	351,708
Nr. of groups	207,800	33,122	174,678	33,122	174,678
Wald test	310.32	370.66	185.68	278.79	142.03
Sargan overid. Test	4.24	2.68	2.85	46.12	16.20

Note: Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%. Dependent variable is the percentage growth of imports over the previous year. Importing countries are Botswana, Namibia, South Africa and Swaziland. Endogenous variable in GMM estimations are the NTM variable and the NTM-sectoral interaction terms.

Finally, we perform estimations separately by importing country again using the dummy variable NTM variable with full coverage for Botswana, Namibia and South Africa given data limitations for Swaziland. Results reported in Table 15 show a large heterogeneity across countries, with negative impacts on Botswana and SADC but with significant positive impacts on non-SADC countries (columns 1-2). The magnitude of the coefficient is more than double that for the pooled regression in column 5 Table 14. In comparison, when we employ the continuous numerical NTM variable there is no discernible effect on Botswana's import growth (columns 3-4). The NTM coefficients in Namibia and South Africa for the SADC have a similar magnitude to that in the pooled regression, although the coefficient for Namibia is not significant.

Overall, these estimates suggest that when South Africa imposes at least one NTM on a sector its imports from other SADC countries drop on average by 60%, while its imports from non-SADC countries rise on average by 6%. The fact that South Africa has the most significant coefficients for the SADC sample, while Botswana and Namibia have less significant coefficients, suggest that economically smaller SADC members face difficulties in tackling NTMs. Regarding Namibia and Botswana whose imports are mainly from South Africa, the NTM coefficient is less significant (especially in the case of the continuous NTM variable), which is consistent with the hypothesis that South Africa is better able to tackle NTMs than other SADC countries. In sum, this analysis undertaken confirms the hypothesis that the NTBs reported to TRAINS are indeed barriers to intra-regional trade for SADC countries.

Table 15: The impact of NTMs on imports in Southern Africa by country

		(1)	(2)	(3)	(4)
Sample		**SADC**	**Non SADC**	**SADC**	**Non SADC**
Dependent variable		**Δ Imp**	**Δ Imp**	**Δ Imp**	**Δ Imp**
Botswana	NTM dummy (full coverage)	-5.186**	5.676		
		(2.381)	(6.530)		
	Ln NTM (full coverage)			0.185	-0.560
				0.447	0.520
Namibia	NTM dummy (full coverage)	-0.585	-0.021		
		(0.456)	(0.523)		
	Ln NTM (full coverage)			-1.379	0.082
				(1.181)	(1.197)
South Africa	NTM dummy (full coverage)	-0.601***	0.064		
		(0.168)	(0.068)		
	Ln NTM (full coverage)			-0.689***	0.100
				(0.207)	(0.087)

Note: Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%. Dependent variable is the percentage growth of imports over the previous year. Endogenous variable in GMM estimations is the NTM variable.

3 Addressing non-tariff barriers in SADC

The results of the previous section are of concern to proponents of regional integration in SSA. They suggest that the imposition of NTBs by SADC countries is usually handled better by non-SADC than SADC countries (except perhaps South Africa). In light of these results, initiatives aimed at tackling NTBs and their impacts on trade at the regional level become even more important. This section examines the extent to which such actions are being undertaken in SADC and discusses additional measures that could help further reduce the remaining NTBs. We first present an overview of the SADC trade protocol and its rules relating to NTBs. We then supplement the analysis undertaken in Section 2 with a qualitative assessment and synthesis of NTBs identified in most recent TPRs and other regional databases. Finally, we make reference to the experiences of other RECs in their efforts to reduce NTBs and foster closer market integration, and highlight potential lessons for SADC.

3.1 The SADC Trade Protocol and Rules on NTBs

The SADC Trade Protocol was designed to reduce or eliminate barriers to trade within the region. NTBs are defined under the SADC Trade Protocol (1996), implemented in 2000, as 'any barrier to trade other than import and export duties.' Under the Trade Protocol and Article 6, SADC's position on NTBs is further elaborated with regard to intra-SADC trade: 'Except as provided for in this Protocol, Member States shall, in relation to intra-SADC trade: a. Adopt policies and implement measures to eliminate all existing forms of NTBs; and b. Refrain from imposing any new NTBs.'

In support of the SADC Free Trade Area (FTA) launched in August 2008, the following are intended to be implemented:[43]

1. Gradual elimination of tariffs;
2. Adoption of common rules of origin;
3. Harmonisation of customs rules and procedures;
4. Attainment of internationally acceptable standards, quality, accreditation and metrology;
5. Harmonisation of SPS measures;
6. Elimination of NTBs;
7. Liberalisation of trade in services; and
8. Evaluation of trade policies and strategies.

Points 2, 3, 4 and 5 may in some circumstances be considered as NTBs, as discussed in previous sections, should they act as a deliberate impediment to trade. Article 9 of the SADC Trade Protocol, Article 9 clearly provides general exceptions.

> 'Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between Member States, or a disguised restriction on intra-SADC trade, nothing in Article 7 [Quantitative Import Restrictions] and 8 [Quantitative Export Restrictions] of this Protocol shall be construed as to prevent the adoption or enforcement of any measures by a Member State:

[43] All SACU members are also members of SADC and signatories to the SADC Protocol on Trade which entered into force in 2000; the SADC FTA was launched in August 2008 and all signatories have undertaken their respective tariff phase down commitments. However, SADC also has ambitions to become a CU by 2010, a Common Market by 2015 and a Monetary Union by 2016. Clearly some of these areas of competence overlap with those of SACU.

a. Necessary to protect public morals or to maintain public order;
b. Necessary to protect human, animal or plant life or health;
c. Necessary to secure compliance with laws and regulations which are consistent with the provisions of the WTO;
d. Necessary to protect intellectual property rights, or to prevent deceptive trade practices;
e. Relating to transfer of gold, silver, precious and semi-precious stones, including precious and strategic metals;
f. Imposed for the protection of national treasures of artistic, historic or archaeological value;
g. Necessary to prevent or relieve critical shortages of foodstuffs in any exporting Member State;
h. Relating to the conservation of exhaustible natural resources and the environment; or
i. Necessary to ensure compliance with existing obligations under international agreements.

The Protocol provides for some variation in terms of commitments should difficulties arise (for example, with respect to export duties and QRs), so long as no less favourable treatment is granted to member states than to third countries. In the case of import duties (Article 4), this clause does not apply to fees or similar charges commensurate with the costs of services rendered.

3.2 NTBs identified and measures in place in SADC

The most recent TPRs available for SADC members, most of which are dated from 2006 onwards,[44] show that most of the NTBs reported as problematic for traders fall within the following categories: price controls; quantitative restrictions; and other charges intended to protect local industry and/or encourage local processing.[45] Most of these trade measures are applied unilaterally, including those geared towards infant industry protection agreed amongst SACU and other SADC members with varying levels of application.

However, products and sectors deemed sensitive across individual members of SADC, which therefore warrant protection, are in many cases common. For example, industries related to agriculture, dairy, meat, grains, flour, sugar, wood and precious stones are frequently mentioned as benefitting from specific protective measures such as export and import prohibitions, quotas and/or local processing requirements or addition duties levied. Despite this, it is difficult to identify regional priority products for the region, which suggests a lack of harmonisation of protective measures across members.

Although not explicitly discussed in TPRs as being problematic a number of areas are mentioned as requiring closer regional cooperation, and harmonisation of institutions and regulations. These include the following, each of which is discussed briefly in turn: Competition policy; Infant industry protection; SPS/TBT measures; Rules of origin; and Customs procedures.

3.2.1 Competition policy and infant industries

Article 25 of the SADC Trade Protocol states that its members shall implement measures within the Community that prohibit unfair practices and promote competition. Although much progress has been made in divesting state-owned enterprises, there are many examples identified within the most recent TPRs for SADC members of monopolistic practices; in some cases examples are related to the provision of public utilities, but in others to the export of specific products (diamonds in Botswana or black tea in Mauritius). Moreover, for a number of SADC members there are references included to specific economic empowerment movements which are intended to shore up domestic industry through, for example, specific quota allocations in selected industries.

[44] No reviews are available for DRC, the Seychelles or Zimbabwe.

[45] See Table K, Appendix 6.

That is, monopolistic practices are being promoted in order to promote infant industries. Although such practices are permitted within the SADC Protocol – Article 21 on the Protection of Infant Industries permits the suspension of certain obligations of the Protocol – it specifies that terms and conditions should be imposed in order to minimise excessive disadvantages. However, at present there appears to be a policy void in terms of competition policy, with many SADC members yet to create and implement related policy. This is less of a problem for SACU members as the 2002 Agreement obliges each member to have a competition policy. But infant industry across the SADC region could be much stronger if coordinated and monitored. The establishment of competition authorities could assist in this monitoring process. This gap is recognised within SADC and there are a number of initiatives under way to address it, starting with capacity development.

3.2.2 Sanitary and phytosanitary standards/technical barriers to trade

There are a number of examples mentioned in the TPRs of SADC members of limited testing, and therefore conformity and development of standards related infrastructure. This limits the ability of members to sign mutual recognition agreements with regional partners and instead the fall-back position becomes reliance on standards of the most dominant trading partner –South Africa. However, specific mention is made in South Africa's most recent TPR of the uncoordinated manner in which some standards and technical regulations are created and implemented. Moreover, it mentions how some quality and technical standards are particularly stringent for those products of export significance for South Africa; these may subsequently constitute an NTB for other SADC members should they become the de facto standard of choice.

The harmonisation of quality standards within the SADC region could create opportunities to provide support to lesser developed members and their associated supply side challenges. Costs of complying with public and private standards are usually born by producers and for smaller producers may be prohibitive therefore excluding smaller operators from participating in emerging trade opportunities arising from increases in market access. What is needed is a framework of public regulation that encourages pro-development private rules.

There is a regional accreditation body which is working to put in place a pool of internationally acceptable accredited laboratories and certification bodies. But these efforts need to be strengthened and specific product regulations which may constitute NTBs (private as well as public regulations) need to be monitored closely. The importance of coordinating and harmonising product standards and rules with other overlapping RECs, such as COMESA and the EAC as part of the Tripartite process is recognised (see Box 1). But the importance of working closely with private sector actors as well as public should not be underestimated and a more strategic approach could be adopted.

Box 1: TradeMark

The newly created TradeMark Southern Africa (TMSA) Programme is responsible for building on the work of the recently completed Regional Trade Facilitation Programme and supporting the regional integration process of East and Southern Africa. TMSA will do this by working closely with TradeMark East Africa (TMEA) in support of the activities of the COMESA–EAC–SADC Tripartite process. This mainly involves support of the design and planned implementation of the COMESA–EAC–SADC FTA and reducing costs of cross-border transactions through a transport corridor approach addressing both trade facilitation issues and infrastructure constraints. TMSA will engage closely with TMEA to support trade and infrastructure design; and construction and implementation of activities of the COMESA–EAC–SADC Tripartite process. Other activities will include supporting the WTO Least Developed Country Group in Geneva and supporting the improvement of market access of the region's agricultural products through addressing standards and compliance.

See: http://www.trademarksa.org/

3.2.3 Rules of origin

The SADC Trade Protocol sets out the basic requirements for goods to be regarded as 'originating' it must have been wholly obtained in one of the Parties; or the non-originating materials incorporated in the product must have undergone 'sufficient working or processing' in accordance with the conditions set out in Annex I (see Box 2). Annex I also lists the specific criteria (mostly with respect to HS tariff headings (at various levels)) that non-originating materials must meet for a final good to acquire originating status. Within the regional trade policy there is scope for bilateral agreement to be reached. According to Annexes II and III of the Agreement between Mozambique and Malawi, the basic requirements for goods to be regarded as 'originating' are that the product must have been wholly obtained in one of the Parties; or the value-added resulting from the production process must be at least 25% of the ex-factory cost of the goods. Similar requirements are set out in Annexes I, III, and IV of the Agreement between Mozambique and Zimbabwe.

Box 2: Rules of origin as provided for in Annex I of SADC Trade Protocol

For a product to qualify as originating in a SADC member state, it must meet one of the criteria of the SADC rules of origin.

- **'Wholly produced/obtained'** rule: goods that are produced or manufactured in a member state using materials from within the region count as originating from within the SADC region.
- **'Sufficiently worked or processed'** rule: the working of a product into a new one that is significantly different.

To establish whether a product has been sufficiently worked or processed, it will undergo the 'limited import test' (import content or value addition criteria) or the 'HS tariff classification test' (change of tariff heading rule). Therefore, a product which is simply repacked or mixed would not qualify as originating in a member state. Documentary evidence is required at the customs border post for a product to be allowed duty-free access into a member state. For the purposes of determining the origin of goods, SADC member states are considered as one territory – cumulation occurs when a product is manufactured in more than one Member State. Tolerance values are set which means that non-originating materials may be used provided that: (i) their total value does not exceed 15 per cent of the ex-works price of the product; and (ii) any of the percentages given in the list for the maximum value of non-originating materials are not exceeded through the application of this sub-paragraph. However, this excludes products falling within HS chapters 50 to 63, 87 and 98.

Under the SADC rules of origin Malawi, Mozambique, Tanzania and Zambia (MMTZ) have special dispensation for textiles and garments shipped to South Africa and the SACU partner countries namely Botswana, Lesotho, Namibia and Swaziland. These arrangements provide for greater flexibility and make it easier for MMTZ to qualify for SADC tariff preferences using fabrics imported from outside the region. These special arrangements are to enable industries in MMTZ to recapitalise and are therefore temporary allowed by derogation to the provisions of the Protocol on Trade.

Source: http://www.sadc.int/fta/index/browse/page/219; Annex I on SADC rules of origin, updated April 2008.

The TPR for Zambia (2009) shows that, while COMESA provides for four alternative criteria for determining the origin of a product, SADC rules of origin are negotiated on a product-by-product basis in many cases making them more complex and varied across products. In all cases, an appropriate certificate of origin, issued by the exporting country, must accompany eligible imports. For countries covered by more than one trade agreement, importers have a choice of the trade arrangement/regime under which to import, which does not necessarily create difficulties. It may, however, cost new entrants by increasing the complexity of exporting to different markets within the region (by reducing scale benefits), therefore impeding (product and market) export diversification efforts, particularly if rules of origin are more stringent in one market than another.[46]

A recent study undertaken by the Eastern and Southern African Business Membership Organisation Network across companies in SADC, EAC and COMESA shows that 47% of the companies surveyed in the three RECs either do not know or understand the rules of origin of the countries to which they export. Other concerns include:

[46] Both COMESA and SADC rules of origin provide for regional culmination.

- Length of time taken to obtain certification of origin – 30% reported that it takes too long; one in four companies reported that it takes more than three days to obtain;
- Problematic administration procedures and documents – between one-third and one-quarter of the sample found that costs of proving the compliance with rules of origin are prohibitive.

It is important to keep in mind the objectives of rules of origin whose purpose is both to avoid trade deflection[47] and to ensure that members of RECs benefit from market access entitlements relative to competition from third-party countries. If too restrictive or uncoordinated with emerging production networks and business strategies, this may render regional trade liberalisation ineffective. A region-wide FTA is an important means to better align compatibilities in global and regional rules. But, as the results from recent surveys across business associations suggest, increased regional business advisory services may be required in order to design and disseminate business-friendly rules of origin.[48]

Each of the three main RECs of Eastern and Southern Africa – COMESA, EAC and SADC – has its own preferential rules of origin which complicates administration and adds to costs of compliance, both for producers as well as governments. These difficulties are recognised and efforts are being made to address them (discussed in Section 3.2).

As summarised by Brenton (2003), whilst it is difficult to derive specific recommendations in relation to best practice on the design of rules of origin some general propositions can be made.

- Rules of origin should be simple but precise, transparent and, to the extent possible, predictable and stable.
- They should be designed to have the least trade distorting impact and should not become a disguised non-tariff barrier to trade.
- As much as possible, rules of origin should be consistent across products and across agreements. The greater the inconsistencies, the greater the complexity of the system of rules of origin both for companies and for officials administering various trade schemes.

Further, it is noted that simple, consistent and predictable rules of origin are more likely to foster the growth of regional production and trade networks, whilst different rules for the same product in different agreements is likely to hamper such development. In general, rules of origin which vary across products and agreements add considerably to the complexity and costs of participating in and administering trade agreements. The burden of proof and costs typically falls heavier upon smaller firms. Proliferating free trade agreements with differing rules of origin can further complicate customs procedures and may compromise progress made on trade facilitation.

3.2.4 Customs procedures

Recent TPRs for SADC members clearly show that the benefits of SADC's single administrative customs documentation are acknowledged but excessive fees and other duties and charges remain problematic. To reduce clearance waiting time at border posts SADC is in the process of developing 'one stop' border posts at the borders between Mozambique and Zimbabwe (Forbes–Machipanda), South Africa and Mozambique (Lebomba–Ressano Garcia) and Zimbabwe and Zambia (Chirundu). It is also reported that SADC customs

[47] Where imports are redirected through the FTA member with the lowest external tariff (see Schiff and Winters, 2003).

[48] For examples of needs highlighted in other regions and solutions to address them, see Wignaraja and Lazaro (2010).

administrations have enhanced their cooperation by entering into bilateral Memorandum of Understanding for mutual customs administrative assistance.[49]

3.3 Other strategies to address the trade effects of NTBs in SADC

As the SADC Secretariat acknowledges, members have agreed both to eliminate all NTBs and not to impose any new ones except on legitimate grounds of health and safety, public morals, and national security concerns. The removal of import and export restrictions has proved challenging and is complicated by the fact that often NTBs may result from legitimate policies that are not intended to restrict imports, e.g. disease outbreaks may restrict exports of meat products. Nevertheless, as tariffs recede and the regional integration process within SADC gathers pace there are concerns over the potential for NTBs to increase.

The SADC Secretariat has attempted to mitigate this risk by establishing an action plan and monitoring mechanism for NTBs within the region. But Mthembu-Salter (2007) argues that the monitoring mechanism appears to address only those NTBs that affect those companies from different countries within the region which are in direct competition with each other. There are a whole range of NTBs within the region which are not being addressed by SADC – including infrastructural constraints and other *ad hoc* import bans which need to be disciplined. Despite these concerns, the monitoring of NTBs and responding to private sector concerns about them constitutes one step towards reducing them.

The monitoring of NTBs by SADC has to some extent been superseded by other regional initiatives, including the Tripartite Agreement between it, COMESA and EAC. This agreement has resulted in the NTB Monitoring Mechanism being established to support efforts to integrate the economies of COMESA, EAC and SADC as part of the Tripartite Agreement. Below we first discuss the results from the Tripartite monitoring exercise of NTBs, and then briefly outline the steps being taken to address private sector concerns about them. Finally, we highlight the experience of other regions and the potential lessons offered.

3.3.1 Monitoring non-tariff barriers in SADC

NTBs registered recently by or against SADC members and for which the type of NTB is detailed are summarised in Table 16.[50] The greatest number of complaints has been reported by Namibian importers and exporters against Namibian policies (complicated customs procedures and import and export quotas).

Table 16: Types of NTB by SADC members between 21 January 2009 to 8 June 2010

	Angola	Botswana	DRC	Lesotho	Madagascar	Malawi	Mauritius	Mozambique	Namibia	Seychelles	South Africa	Swaziland	Tanzania	Zambia	Zimbabwe	Total
Grand total	**9**	**28**	**13**	**14**	**5**	**32**	**3**	**20**	**36**	**16**	**40**	**13**	**19**	**33**	**24**	**305**
6. Trade related administrative NTBs	3	9	2	3		6	2	1	6	7	14	4	4	2	5	**68**
3.1 Export/import licence		2	3	2	2	6			6	5	1			6	4	**37**
5.5 Transit issues	1	7	2			2		5	1		2		5	7	1	**33**
2 Technical barriers to trade (TBT)	1	4	1			4	1	2	4		6		1	2	1	**27**
1. SPS measures		1		3		4		1	2		5		4	4	2	**26**
5.3 Clearance procedures	1		2	1		1		4	1	4	1	5	1	3		**24**
7. Payments	1	1	1	2	1	1		2	1		3	1	3	1	2	**20**
3.2 Quotas		3		1		3			7		2				3	**19**
5.6 Rules of origin			2		2	1		2			4	1		6	1	**19**

[49] See: http://www.sadc.int/fta/index/browse/page/219

[50] Table L, Appendix 6, summarises all reports (coded or not) by notifying and imposing country.

	Angola	Botswana	DRC	Lesotho	Madagascar	Malawi	Mauritius	Mozambique	Namibia	Seychelles	South Africa	Swaziland	Tanzania	Zambia	Zimbabwe	Total
5.2 Customs documentation		1		1		1			7		2	1			3	**16**
5.4 Pre-shipment inspection	1					3		1	1				1			**7**
5.1 Customs valuation								1				1		1	2	**5**
4. Immigration/consular requirements for cross-border traders	1			1				1								**3**
5.7 Safeguards														1		**1**

Source: http://ntb.africonnect.com/startreport.php

The main source of NTBs relate to trade administration in South Africa. This category of NTBs is also the most frequently reported barrier for all SADC members, followed by export and import licences and transit issues.[51] All NTBs reportedly imposed by South Africa have been against other SADC members, most notably Botswana, Malawi and Zimbabwe, or its own domestic importers and exporters. This is also *mostly* the case for NTBs imposed by other SADC members and registered on the database (Table 17): those imposed on RoW are either not reported and are therefore less problematic for importers and exporters, or are simply less applied. These results appear to substantiate those of the quantitative analysis undertaken in Section 2.

Table 17: Reported NTBs imposed by SADC members, 21 January 2009 to 8 June 2010

Imposing Country	Against other SADC	Against RoW	Against domestic importer/exporter	Total
Angola	9			**9**
Botswana	24	1	3	**28**
DRC	3		10	**13**
Lesotho	7	1	6	**14**
Madagascar	2		3	**5**
Malawi	15	2	15	**32**
Mauritius	3			**3**
Mozambique	14		6	**20**
Namibia	5		31	**36**
Seychelles	5		11	**16**
South Africa	36		4	**40**
Swaziland	3		10	**13**
Tanzania	6	1	12	**19**
Zambia	24	2	7	**33**
Zimbabwe	11	1	12	**24**
Total	**167**	**8**	**130**	**305**

Source: Adapted from http://ntb.africonnect.com/startreport.php

3.3.2 Measures to address NTBs in SADC

That monitoring mechanisms have only recently been put in place in SADC suggests that the process of reducing NTBs so as to spur increasing intra-regional trade flows is at a fairly early stage. However, this would be misleading to some extent: the SADC Trade Protocol provides for regional rules of origin, even if at the present time these are reported to complicate rather than facilitate intra-regional trade. What it actually suggests is that the steps towards reducing NTBs through the targeting of product-specific

[51] Negasi (2009) points out that not only are NTMs widespread, constituting an obstacle to intra-regional trade expansion, but that they also help to undermine the credibility of the Trade Protocol.

measures first, in order to foster the development of regional production networks and enhance the ability to tap into other types of global network, are being followed.

However, there remains much work to be done both to scale up initiatives and apply across regional priority products identified, and to ensure that surveillance mechanisms established at the regional level are matched with enforcement. Unfortunately, the distribution of reported NTBs across different sectors, and therefore products, registered on the Tripartite NTB Monitoring Mechanism is not currently clear; this makes analysis of the products most susceptible to NTBs difficult; the coding of the new database could be improved in order to make this analysis easier.

The experience of other regions, such as South East Asia, suggests that further to the identification of NTBs,[52] different types of barrier should be categorised according to their intent and impact, before starting to eliminate or harmonise them. For example, the Association of Southeast Asian Nations (ASEAN) began the process of elimination of NTBs by first, identifying priority sectors; second monitoring the imposition of NTBs; and third analysing their intent and impact. The categorisation of NTBs was based on the following criteria:[53]

- **Trade impact:** indicated by the number of private sector complaints; the difference between domestic and world prices; trade values/volumes affected;
- **Regulatory objective:** protection of consumers or generation of revenue;
- **WTO consistency:** in accordance with WTO principles, NTMs must be transparent, non-discriminatory, have a scientific basis (SPS) and have no better alternative.

Measures were subsequently classified as:

- **red**: to be removed immediately;
- **amber**: not clearly identified as a barrier, continued monitoring required;
- **green**: can be maintained as justified.

The elimination of NTBs was therefore undertaken as a bottom-up process which responded to private sector concerns, but which was approached objectively, cautiously, and strategically by governments. There is continued debate in relation to the experience in South East Asia as to whether or not increases in intra-regional trade simply reflect the rapid growth experienced in this region compared to the rest of the world. Despite this debate, it is generally recognised that the process of fostering closer regional integration in ASEAN has been driven largely by private sector concerns, and has been fairly light in terms of associated rules and regulations. For example, the ASEAN Free Trade Area (AFTA) uses a single method for rules of origin across all products.[54] Despite this, Brenton (2003) notes there have been some suggestions of under-utilisation of AFTA preferences and some inconsistent application within the region due to different interpretations of rules.

[52] ASEAN Members identified eleven priority sectors in 2004: electronics, information technology, healthcare, wood-based products, automotives, rubber-based products, textiles and apparel, agro-based products, fisheries, air travel and tourism. The choice of these sectors was based on an assessment of comparative advantage, cost competitiveness, potential value-addition to the economy and labour skills. These sectors contributed approximately 50% of the total value of intra-regional trade at that time (see World Bank 2008).

[53] The following is taken from World Bank (2008).

[54] AFTA rules of origin require non-originating import content of less than 60 per cent of the FOB price of the product where the value of non-originating materials is based upon the CIF import price or the earliest ascertained price for products of undetermined origin. The rules stipulate that the final process of manufacture is carried out in the exporting member state, although what constitutes 'the final process' is not defined (see Brenton, 2003).

This merely serves to emphasise the point that the development of regional surveillance mechanisms should be an ongoing process: the impact of policy changes such as the reduction and harmonisation of NTBs to trade, including intra-regional trade, depends more on how exporters and potential exporters *respond* – which should be monitored – rather than simply on the legal details.[55] And although the experience of other regions may offer some general lessons, there will be regional specifities which must be also addressed. Progress on the reduction of NTBs is likely to take time, cost and may involve some difficult trade-offs.

[55] See Page (1994).

4 Conclusion

Intra-regional trade in Africa is low and there are different views as to why this is the case. But there have been some improvements for RECs in recent years. We have presented and discussed recent trends in intra-regional trade for two SSA's RECs – ECOWAS and SADC. Attempts were made to reconcile recent trends with theory. The extent to which the composition of exports and imports within these regions suggests a potential for increased intra-regional trade flows has been analysed in two ways: first, using RCA indicators; and second, using trade complementarities indices. This has revealed the extent to which existing productive structures are likely to be conducive to intra-regional trade and therefore responsive to reductions in barriers to trade, such as NTBs.

We have then explored the extent to which intra-trade flows are constrained by NTBs and focused on SADC due to data limitations for ECOWAS. As tariffs are reduced between members of RTAs there are real concerns that NTBs may increase. A failure to adequately tackle and harmonise types of NTMs, such as standards and other regional rules and regulations, as part of the process of fostering closer integration – deeper integration issues – may further limit potential dynamic gains, should they restrict rather than facilitate intra-regional trade flows.

Results from the quantitative analysis undertaken suggest that NTBs reported to UNCTAD TRAINS disproportionately impact on intra-regional trade in SADC. To the extent that they divert imports away from regional towards non-regional partners, the establishment of NTBs seems to stifle intra-regional trade. Moreover, NTBs are identified as a particular binding constraint for the economically smaller members of SADC. Specific policy recommendations which arise from our analysis for SADC include:

- *Improving the coding of the new tripartite NTB monitoring database*. For example, by sector and product, including indicators related to the severity of impact for importers and exporters - in terms of time, cost and related trade impacts.
- *Linking the monitoring of NTMs to compliance and enforcement mechanisms.* Once NTBs have been reported and analysed they need to be acted upon which requires dialogue and collaboration at the regional level and between national institutions.
- *Investing in conformity infrastructure*. Limited testing infrastructure constrains the ability of members to sign mutual recognition agreements with regional partners and instead the fall-back position becomes the standards of the most dominant trading partner, which may themselves constitute NTBs for lesser developed regional partners. Results from our analysis suggest the economically smaller members of SADC find NTBs a particular challenge, which may be a result of scale and a limited ability to spread fixed costs over a large export basket, or because of limited conformity infrastructure within country.
- *Harmonising infant industry protection*. Article 21 of the SADC Protocol on the Protection of Infant Industries permits the suspension of certain obligations of the Protocol, but it also specifies that terms and conditions should be imposed. However, at present there appears to be a policy void. Although SACU members are obliged to have a competition policy, commitments needs to be matched with enforcement. This is to say, infant industry across the SADC region could be much stronger if coordinated and monitored. This includes identifying regional priority products and harmonising related policy (for example, creating simple, consistent and predictable RoO) so as to spur regional growth dynamism.

As efforts to foster closer regional integration in SADC gather pace it is important to note that the monitoring of NTBs does not end as efforts begin to reduce negative impacts, but instead needs to continue as regional surveillance mechanisms, policy and related compliance and enforcement mechanisms

further develop and strengthen. Whether or not efforts to further promote regional integration on the continent in the 21st century can lead to increased intra-regional, as well as international trade, arguably depends on a more strategic approach to 'behind the border' issues being adopted so that the potentially dynamic gains from deeper integration may be harnessed.

References

Arellano, M., and S. Bond (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies* 58: 277–97.

Aryeteey, E (2002), Regional Integration in West Africa, *OECD Development Centre*, Working Paper No. 170. Research Programme on: Integration and Co-operation in Sub-Saharan Africa

Balassa, B. (1965), *Trade Liberalisation and Revealed Comparative Advantage*, The Manchester School, 33, 99-123.

Baldwin, R. (1970), *Non Tariff Distortions in International Trade*. Washington, D.C.: Brookings Institution.

Bhagwati, J. (1965), On the equivalence of tariffs and quotas, in Trade, Growth and the Balance of Payments, edited by Caves, R., Chicago: Rand-McNally.

Bhagwati, J. (1968) More on the Equivalence of Tariffs and Quotas, American Economic Review, March 1968, pp.142-46.e on the Equivalence of Tariffs and

Bilal, S. (2007) Can the EU be a Model of Regional Integration? Risks and Challenges for Developing Countries, http://www.ecdpm.org/Web_ECDPM/Web/Content/Download.nsf/0/52D667FD6C95057DC125719D004B65F6/$FILE/Bilal%20-%20Can%20EU%20be%20a%20model%20of%20RI%20Draft%20for%20comments.pdf ,

Bora, B., Kuwahara, A., and Laird, S. (2002) Quantification of Non-Tariff Measures, Policy Issues in International Trade and Commodities Study Series No. 18, United Nations Conference on Trade and Development: Geneva. (http://www.unctad.org/en/docs/itcdtab19_en.pdf)

Brenton, P. (2003) Notes on *Rules of Origin with implications for regional integration in Southeast Asia,* http://www.pecc.org/publications/papers/trade-papers/4_ROO/2-brenton.pdf

Calì, M. (2009) Impediments to Intra Regional Trade in sub-Saharan Africa, *Mimeo.*

Deardorff, A.V., 1987. Why do governments prefer nontariff barriers? Proceeding of the Carnegie-Rochester Conference on Public Policy, Jan. 1-1, Elsevier, USA., pp: 191-216. (http://ideas.repec.org/a/eee/crcspp/v26y1987ip191-216.html)

Deardorff, A.V. and Stern, R. (1998) Measurement of Nontariff Barriers, University of Michigan: University of Michigan Press.

de Benedictis, L., and M. Tamberi (2001), A Note on the Balassa Index of Revealed Comparative Advantage, http://dea2.univpm.it/quaderni/pdf/158.pdf

de Melo, J. and Panagariya, A. (1993) New Dimensions in Regional Integration, Centre for Economic Policy Research, Cambridge: Cambridge University Press.

European Commission (2002), *Trade and Development: Assisting Developing Countries to Benefit from Trade*, Communication from the Commission to the Council and the European Parliament, COM (2002) 513 final, 18 September.

Foroutan, F. (1993) Regional Integration in sub-Saharan Africa: Past experience and future prospects, pp234-271 in de Melo, J. and Panagariya, A. (1993) New Dimensions in Regional Integration, Centre for Economic Policy Research, Cambridge: Cambridge University Press.

Freund, C. and Ornelas, E. (2010) Regional Trade Agreements, Policy Research Working Paper 5314, World Bank: Washington D.C. (http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2010/05/19/000158349_20100519101328/Rendered/PDF/WPS5314.pdf)

Fugazza, M. and Maur, J.C. (2008) Non-Tariff Barriers in CGE Models: How useful for policy? Journal of Policy Making, May-June 2008, pp475-490.

Gasiorek, M. and P. Holmes (2008), 'Globalisation and Deep Integration', CARIS draft paper.

Goretti, M. and Weisfeld, H. (2008) Trade in the WAEMU: Developments and Reform Opportunities, IMF Working Paper WP/08.68, International Monetary Fund: Washington D.C. (http://www.imf.org/external/pubs/ft/wp/2008/wp0868.pdf)

Hausmann, R., and B. Klinger. 2006. 'Structural Transformation and Patterns of Comparative Advantage in the Product Space.' Harvard University Center for International Development Working Paper #128. (http://www.hks.harvard.edu/var/ezp_site/storage/fckeditor/file/pdfs/centers-programs/centers/cid/publications/faculty/wp/128.pdf)

Kee, H.L., Nicita, A. and Olarreaga, M. (2008), Estimating Trade Restrictiveness Indices, The Economic Journal Vol. 119, Issue 534, pp172-199.

Kee, H.L., Nicita, A. and Olarreaga, M. (2006), Estimating Trade Restrictiveness Indices, Policy Research Working Paper #3840, The World Bank, Washington.

Kee, H.L., Nicita, A. and Olarreaga, M. (2004), Import demand elasticities and trade distortions, Policy Research Working Paper #3452, The World Bank, Washington.

Krugman, P. R. (1993), 'The hub effect: Or, threeness in interregional trade', in W. J. Ethier, E. Helpman and J. P. Neary, eds., *Theory, Policy and Dynamics in International Trade*, Cambridge University Press.

Laird, S. and Vossenaar, R. (1991): Why We Should Be Worried About Non-Tariff Measures, *Informacion Comercial Española*, Special Issue on Non-tariff Barriers, November, pp. 31- 54.

McCulloch, R. (1973) When are a tariff and quota equivalent? Canadian Journal of Economics vol. 6: 503-511.

Michaely, M. (1996) 'Trade Preferential Agreements in Latin America', *World Bank Policy Research Working Paper*, (1583).

Mthembu-Salter, G. (2007) Non-Tariff Barriers in SADC, Chapter Six in TIPS and AusAid (2007) Intra- Trade Performance Review 2007, see http://www.sadctrade.org/files/TPR-2007.pdf

Negasi, M. (2009) Trade Effects of Regional Economic Integration in Africa: The Case of SADC, paper drafted for Services Sector Development and Impact on Poverty Thematic Working Group, http://www.tips.org.za/files/13.Trade_effects_of_Regional_Economic_Integration_-_SSD.pdf

Page, S. (1993) How Developing Countries Trade: The Institutional Constraints, Routledge: London.

Puga, D. and A. J. Venables, (1995), 'Preferential trading arrangements and industrial location', *World Bank Economic Review*, vol. 12, pp. 221-249

Schiff, M. and Winters, A. (2003) Regional Integration and Development, The World Bank: Washington DC.

Shirotori, M., Tumurchhudur, B., and Cadot, O. (2010) Revealed Factor Intensity Indices at the Product Level, Policy Issues in International Trade and Commodities Study Series No. 44, United Nations Conference on Trade and Development: Geneva. (http://www.unctad.org/en/docs/itcdtab46_en.pdf)

Shirotori, M. and Molina, A. (2009) South-South Trade: The Reality Check, Issues in New Economic Geography of Trade, United Nations Conference on Trade and Development: Geneva (http://r0.unctad.org/ditc/tab/publications/DITC-TAB-2008-1-final-17MARCH2009.pdf)

te Velde, D.W. te (2006), (ed.), *Regional Integration and Poverty*, Ashgate.

te Velde, D.W. (2005) Regional Integration and Poverty, ODI Briefing Paper, http://www.odi.org.uk/resources/download/1948.pdf

UNCTAD *Trade Information and Analysis System* database, accessed via the World Bank's *World Integrated Trade Solution* website (http://wits.worldbank.org/witsweb/).

UNCTAD (2009a). *Economic Development in Africa 2009.* New York and Geneva: United Nations (http://www.unctad.org/en/docs/aldcafrica2009_en.pdf).

UNCTAD (2009b). *Handbook of Statistics 2009* online (http://stats.unctad.org/Handbook/ReportFolders/reportFolders.aspx)

Venables, A. (2003) Winners and Losers from Regional Integration Agreements, *The Economic Journal*, 113 (7): 747-61.

Viner, J. (1950) The Customs Union Issue, New York: Carnegie Endowment of International Peace.

Vollrath, T.L. (1991): A Theoretical Evaluation of Alternative Trade Intensity Measures of Revealed Comparative Advantage, *Weltwirtschaftliches Archiv,* Vol.130: 265–279.

Wignaraja, G. and Lazaro, D. (2010) North-South versus South-South Asian FTAs: Trends, Compatibilities and Ways Forward, UNU-CRIS Working Paper W-2010/3, United Nations University: Belgium. (http://www.cris.unu.edu/fileadmin/workingpapers/W-2010-3.pdf)

World Bank (2008) Non-Tariff Measures on Goods Trade in the East African Community, Synthesis Report, prepared for the East African Community, World Bank: Washington D.C. (http://siteresources.worldbank.org/INTAFRREGTOPTRADE/Resources/EAC_NTMs_Report_Oct_10_2008.pdf)

Yang and Gupta (2007) Regional Trade Arrangements in Africa: Past Performance and the Way Forward, African Development Review, Volume 19 (3): 399-431.

Yeats, A. (1998), Does Mercosur's Trade Performance Raise Concerns about the Effects of Regional Trade Arrangements? The World Bank Economic Review. Vol.12 (1):1-28.

Appendix 1 - Major regional economic communities in Africa

Major RECs	Type	Areas of integration and cooperation include:	Date of entry into force	Member States	Specified Objective
Arab Maghreb Union (UMA)	Free Trade Area	Goods, services, investment, migration	17 Feb 1989	Algeria, Libyan Arab Jamahiriya, Mauritania, Tunisia	Full economic union
Common Market for Eastern & Southern Africa (COMESA)	Free Trade Area	Goods, services, investment, migration	8 Dec 1994	Angola, Burundi, Comoros, DRC, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, Zimbabwe	Common Market
Community of Sahel-Saharan States (CEN-SAD)	Free Trade Area	Goods, services, investment, migration	4 Feb 1998	Benin, Burkina Faso, Central African Republic, Chad, Côte d'Ivoire, Djibouti, Egypt, Eritrea, Gambia, Libya, Mali, Morocco, Niger, Nigeria, Senegal, Somalia, Sudan, Togo, Tunisia	Free trade area and integration in some sectors
Economic Community of Central African States (ECCAS)	Free Trade Area	Goods, services, investment, migration	1 July 2007	Angola, Burundi, Cameroon, Central African republic, Chad, Congo, DRC, Equatorial Guinea, Gabon, Sao Tome and Principe, Rwanda	Full economic union
Economic Community of West African States (ECOWAS)	Free Trade Area	Goods, services, investment, migration	24 July 1993	Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	Full economic union
Inter-Governmental Authority on Development (IGAD)	Free Trade Area	Goods, services, investment, migration	25 Nov 1996	Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, Uganda	Full economic union
Southern African Development Community (SADC)	Free Trade Area	Goods, services, investment, migration	1 Sept 2000	Angola, Botswana, DRC, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United republic of Tanzania, Zambia, Zimbabwe	Full economic union
Economic and Monetary Community of Central Africa (CEMAC)	Customs Union	Goods, services, investment, migration	24 June 1999	Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon	Full economic union
East African Community (EAC)	Customs Union	Goods, services, investment, migration	7 July 2000	Kenya, United Republic of Tanzania, Uganda, Rwanda, Burundi	Full economic union
Southern African Customs Union (SACU)	Customs Union	Goods, services, investment, migration	15 July 2004	Botswana, Lesotho, Namibia, South Africa, Swaziland	Custom union
West African Economic and Monetary Union (UEMOA)	Customs Union	Business law, harmonized. Macroeconomic policy convergence in place.	10 Jan 1994	Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, Togo	Full economic union

Source: UNCTAD, 2009a.

Appendix 2: GDP *per capita* for SADC and ECOWAS members

Table A: GDP *per capita* for SADC members (current US$)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Angola	639.3	607.7	753.9	892.0	1225.6	1843.4	2642.8	3376.0	4713.7
Botswana	3586.1	3449.9	3348.3	4615.0	5413.1	5716.3	5902.1	6522.3	6982.2
Congo, Dem. Rep.	84.7	89.7	103.0	102.1	114.6	120.2	140.5	159.6	181.6
Lesotho	414.7	371.4	345.7	507.9	652.5	689.7	753.6	821.8	791.5
Madagascar	253.8	288.0	271.6	328.6	254.7	286.1	304.6	394.7	495.1
Malawi	147.4	140.8	212.3	187.8	197.7	209.1	225.3	248.3	287.5
Mauritius	3861.0	3780.8	3939.3	4587.7	5177.3	5054.4	5193.3	5971.3	7345.0
Mozambique	232.8	217.4	218.1	235.9	280.5	315.8	332.3	367.8	439.9
Namibia	2142.8	1905.0	1770.6	2550.6	3351.1	3614.5	3896.2	4231.1	4149.0
Seychelles	7578.9	7663.1	8333.6	8523.0	8482.4	10661.3	11439.8	10728.3	9579.7
South Africa	3019.9	2643.9	2450.5	3638.6	4660.7	5177.8	5438.3	5929.8	5678.0
Swaziland	1379.7	1181.4	1066.2	1621.0	2046.2	2244.7	2348.6	2561.9	2429.2
Tanzania	273.8	277.4	279.3	286.5	307.8	373.1	367.6	419.5	496.4
Zambia	309.3	339.2	338.7	389.9	472.7	609.7	888.2	926.6	1134.2
Zimbabwe	594.1	820.4	1749.3	591.3	377.2	274.0	0.0	0.0	0.0
Average	1634.6	1585	1679	1937	2200.9	2479.3	2658.22	2843.9	2980

Source: *World Development Indicators*

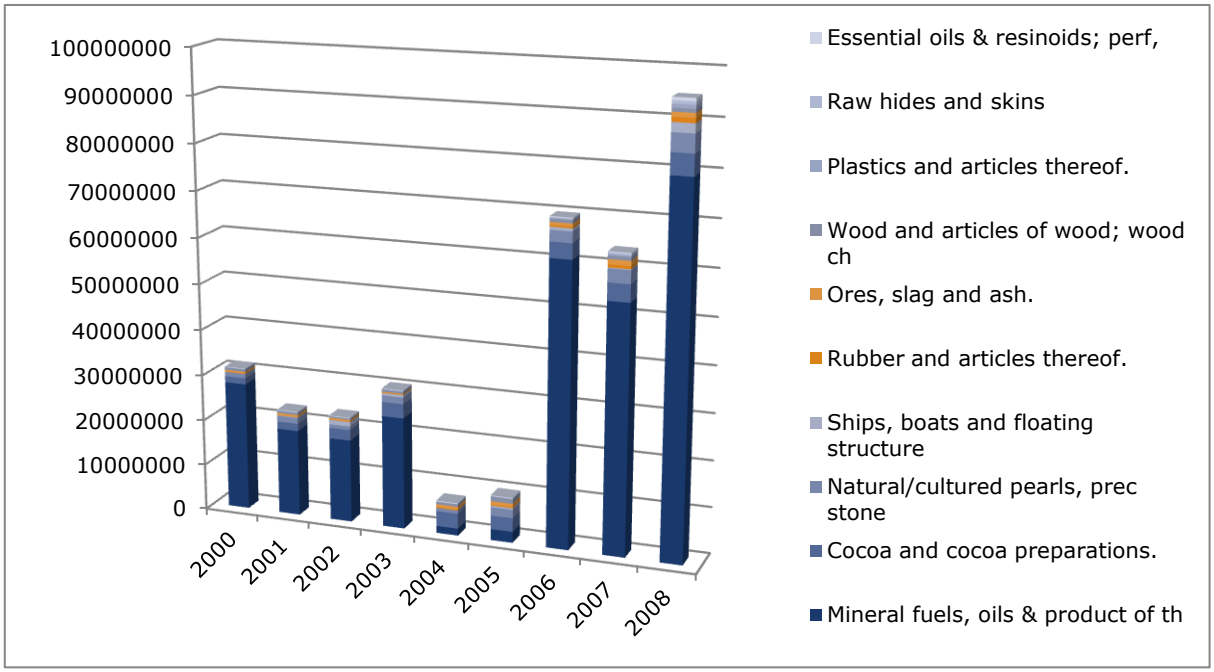
Table B: GDP *per capita* for ECOWAS members (current US$)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Benin	338.6	344.8	394.7	483.5	531.8	545.0	582.5	660.8	771.2
Burkina Faso	223.6	233.5	264.5	332.2	384.4	394.8	405.7	459.7	521.7
Cape Verde	1210.5	1231.2	1355.2	1724.1	1967.2	2093.1	2360.4	2761.9	3193.1
Cote d'Ivoire	602.8	596.2	635.5	744.4	821.7	850.3	882.8	983.7	1137.1
Gambia, The	323.3	310.4	265.7	255.6	270.6	302.1	323.6	402.9	488.6
Ghana	254.9	265.5	300.8	363.8	413.9	489.2	568.1	653.3	713.2
Guinea-Bissau	165.3	149.1	148.8	168.2	198.3	205.0	210.4	247.9	272.7
Guinea	371.2	338.5	350.7	388.3	397.9	318.9	299.8	437.8	386.3
Liberia	198.6	183.6	183.0	130.7	142.7	159.0	176.3	202.6	222.1
Mali	230.2	244.4	303.6	386.8	421.9	448.4	484.1	551.9	687.9
Nigeria	368.3	375.2	451.1	503.9	638.7	796.8	1018.0	1123.2	1369.7
Niger	163.0	170.5	184.0	221.9	229.3	254.2	268.0	300.3	364.1
Senegal	473.8	479.9	511.3	640.5	730.7	770.1	808.9	951.8	1087.0
Sierra Leone	150.4	184.5	206.1	209.4	222.5	242.7	269.8	306.9	351.5
Togo	253.3	245.8	265.8	308.7	352.7	351.8	360.9	396.6	448.8
Average	355.2	356.9	388.0	457.5	514.9	548.1	601.3	696.1	801.0

Source: *World Development Indicators*

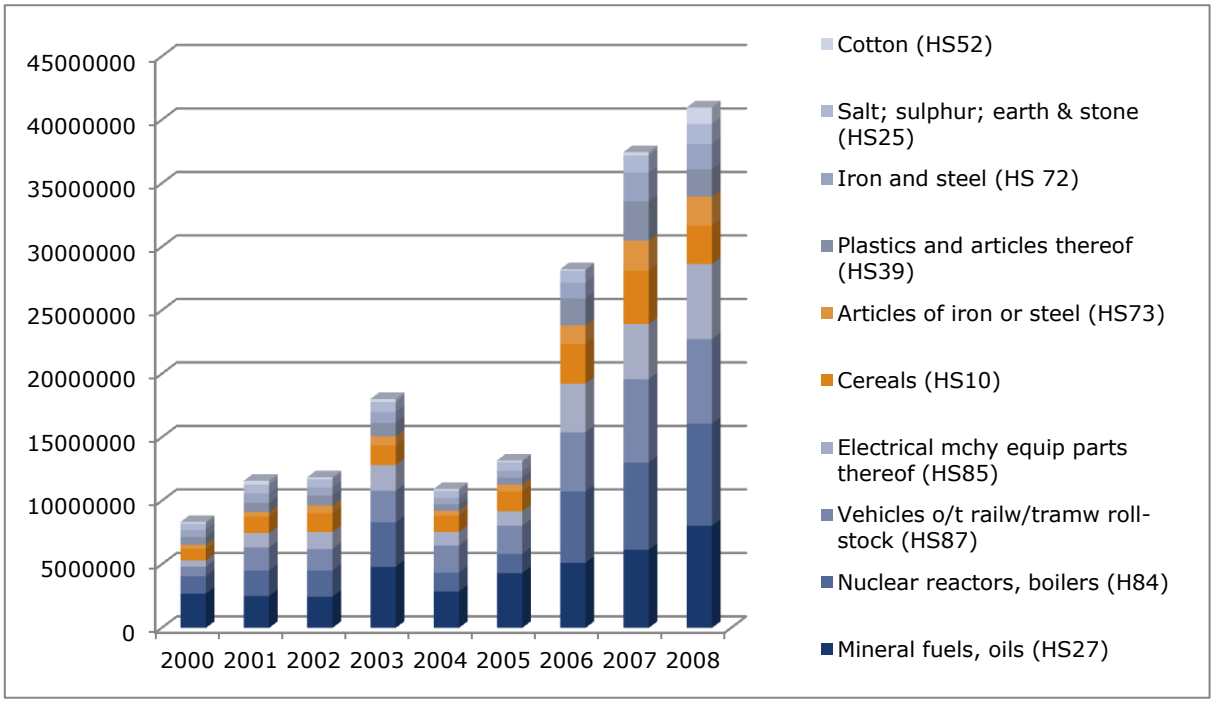
Appendix 3: ECOWAS trade and revealed comparative advantages

Figure A: Value of top ten ECOWAS exports, 2000-8 (US$)



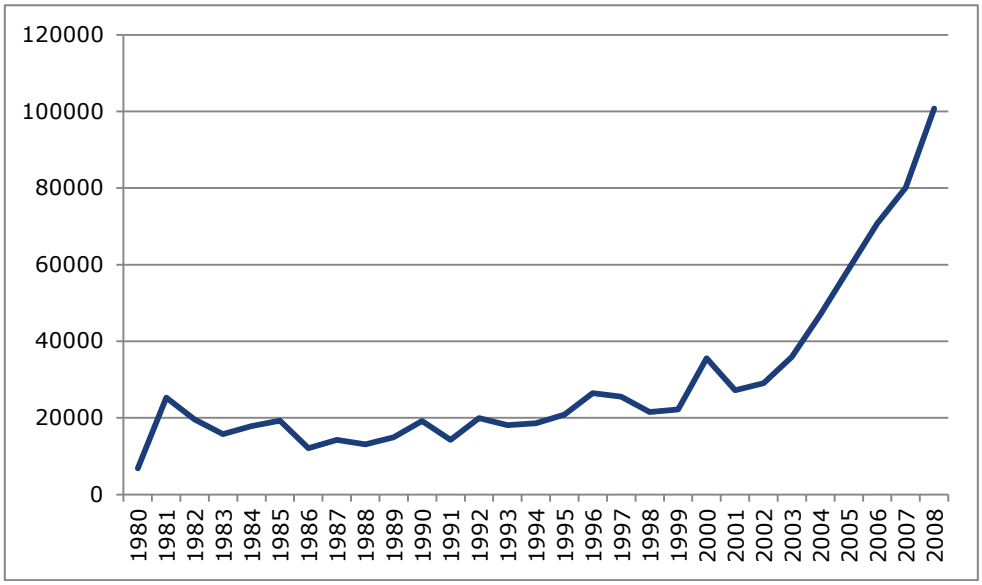
Source: Derived from data obtained from UN COMTRADE database.
Note: Based on available reported data; excludes Liberia.

Figure B: Value of top ten ECOWAS imports, 2000-8 (US$)



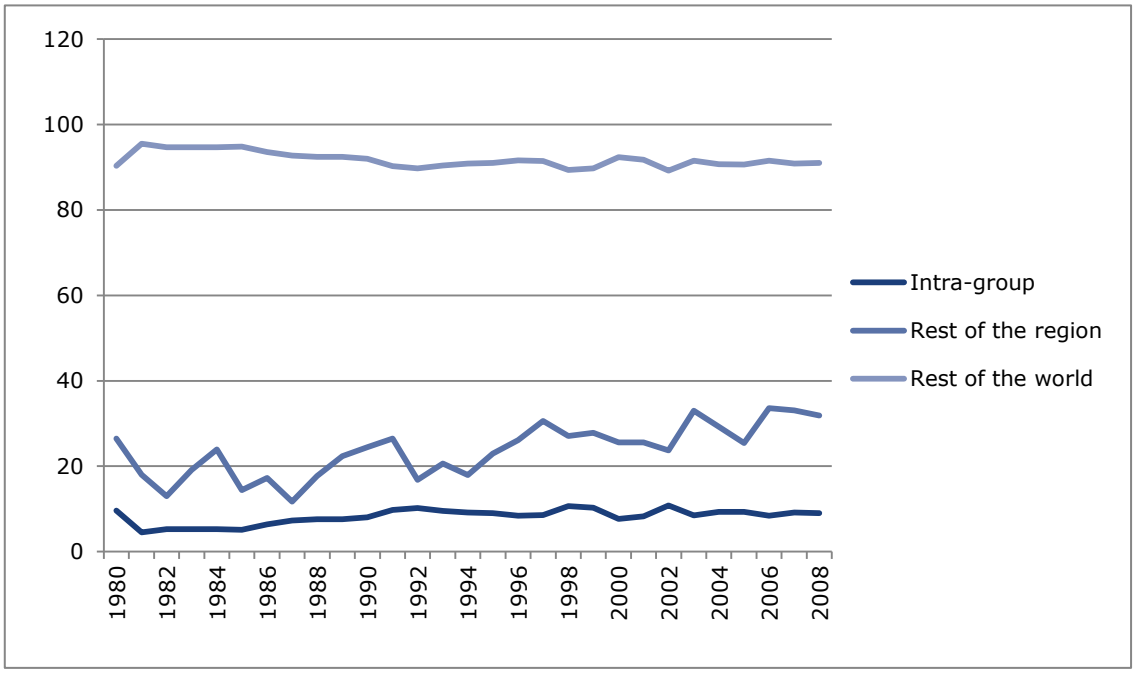
Source: Derived from data obtained from UN COMTRADE database.
Note: Based on available reported data, excludes Liberia.

Figure C: Total value of ECOWAS exports, 1980-2008 (US$ million)



Source: UNCTAD 2009b.
Note: Countries included for each year are not clear

Figure D: Direction of ECOWAS exports, 1980-2008 (percentage by destination)



Source: UNCTAD 2009b.
Note: Countries included for each year are not clear

Table C: RCAs for ECOWAS Members compared to rest of the world

HS	Product	Benin	Burkina Faso	Cape Verde	Côte d'Ivoire	The Gambia	Ghana	Guinea	Guinea-Bissau	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
01	Live animals	0.01	13.82	-	0.00		0.04			17.99	22.88	0.01	0.16		0.01
03	Fish & crustacean, mollusc & other	0.63	0.11	69.38	0.45	10.68	1.28	0.40		0.01	0.05	0.18	19.67		0.14
04	Dairy prod; birds' eggs; natural ho	0.22	0.01	0.00	0.36	10.79	0.43	0.02		0.11	0.02	0.02	1.18	0.08	3.47
06	Live tree & other plant; bulb, root	0.00	0.62	0.00	0.37	0.01	0.07	0.00		0.00	0.00	0.10	0.07	446.51	0.00
07	Edible vegetables and certain roots	0.01	3.70	0.00	0.03	0.68	1.29	0.00		0.07	2.85	0.01	2.91	1.22	0.11
08	Edible fruit and nuts; peel of citr	15.33	3.20	0.00	7.43	15.87	6.89	0.30	199.12	0.22	0.04	0.19	0.87	4.33	0.08
09	Coffee, tea, maté and spices.	0.05	0.00	0.50	6.31	21.77	0.64	1.27	0.00	0.01	0.26	0.07	0.02	0.00	6.37
10	Cereals	0.00	1.39	0.00	0.14	0.37	0.00	0.51	0.00	0.06	0.42	0.00	3.30	0.00	0.37
11	Prod.mill.indust; malt; starches;	20.14	1.39	0.00	0.66	2.00	0.62	0.00	0.00	0.00	0.01	0.07	1.48	10.76	14.87
12	Oil seed, oleagi fruits; miscell gr	7.46	18.12	0.09	0.28	7.89	3.56	0.02	0.01	0.24	0.23	0.42	0.32	0.20	0.25
13	Lac; gums, resins & other vegetable	0.00	0.12	0.00	0.01	0.00	0.09	0.00	0.00	0.24	0.05	2.33	1.94	0.00	0.52
14	Vegetable plaiting materials; veget	0.45	0.05	0.00	4.55	0.00	15.03	0.00	0.00	0.00	0.05	0.64	0.14	0.70	0.00
15	Animal/veg fats & oils & their clea	8.63	2.75	0.00	2.58	17.44	0.34	0.02	0.01	0.01	0.06	0.01	3.05	13.09	5.22
16	Prep of meat, fish or crustaceans,	0.40	0.00	86.35	6.59	5.27	1.91	0.00	0.00	0.00	0.00	0.00	1.81	0.07	0.03
17	Sugars and sugar confectionery.	4.15	6.19	0.21	0.76	3.50	0.07	0.00	0.00	0.06	1.09	0.02	0.28	0.00	0.12
18	Cocoa and cocoa preparations.	0.00	0.00	0.00	127.44	0.00	121.25	1.71	0.00	0.00	0.00	3.26	0.47	0.01	8.91
19	Prep.of cereal, flour, starch/milk;	0.10	0.10	0.88	0.89	0.86	1.39	0.00	0.00	0.10	0.16	0.02	1.13	0.01	0.01
20	Prep of vegetable, fruit, nuts or o	0.02	0.07	0.00	0.15	13.98	0.23	0.08	0.21	0.00	0.03	0.02	0.36	0.00	0.13
21	Miscellaneous edible preparations.	0.00	0.03	0.02	4.43	1.32	0.10	0.31	0.00	0.01	0.01	0.02	5.49	1.00	1.00
22	Beverages, spirits and vinegar.	0.07	0.41	3.06	0.07	0.09	0.04	0.01	0.00	0.07	0.02	0.04	0.24	0.03	7.44
23	Residues & waste from the food indu	5.69	0.34	0.00	0.08	4.35	0.08	0.18	0.00	0.02	0.00	0.08	0.97	0.00	3.23
24	Tobacco and manufactured tobacco su	28.35	8.20	0.00	2.11	0.09	0.35	0.37	0.00	0.03	1.00	0.30	15.96	0.00	0.15
25	Salt; sulphur; earth & ston; plaste	16.20	0.37	0.00	2.77	17.87	0.47	0.00	0.00	0.01	0.10	0.02	31.43	0.00	211.68
26	Ores, slag and ash.	0.00	0.00	0.00	0.12	0.00	1.76	40.24	0.00	0.00	17.17	0.02	0.00	0.00	0.00
27	Mineral fuels, oils & product of th	0.00	0.00	0.00	2.51	0.00	0.09	0.07	0.00	0.04	0.03	6.20	1.90	0.01	0.00
28	Inorgn chem; compds of prec mtl, r	0.03	0.08	0.00	0.11	0.05	0.37	14.07	0.00	0.02	0.00	0.00	9.62	0.00	0.03
31	Fertilisers.	0.00	0.00	0.00	0.85	0.00	0.45	0.01	0.00	0.72	0.00	0.02	1.45	0.00	0.00
32	Tanning/dyeing extract; tannins &	1.09	0.04	0.00	0.35	0.08	0.03	0.00	0.00	0.06	0.00	0.01	0.28	0.00	0.08
33	Essential oils & resinoids; perf,	0.14	0.01	0.00	2.57	0.03	0.17	0.00	0.00	0.03	0.00	0.97	3.08	0.00	0.08
34	Soap, organic surface-active agents	0.31	0.46	0.01	3.34	3.30	0.07	0.01	0.00	0.07	0.08	0.04	1.03	0.00	1.94
36	Explosives; pyrotechnic prod; match	0.00	0.21	0.00	0.11	1.45	3.04	1.48	0.00	0.28	0.04	0.04	0.53	0.86	0.00
40	Rubber and articles thereof.	0.01	0.04	0.00	4.72	0.00	0.75	1.43	0.00	0.02	0.02	0.50	0.09	0.00	0.01
41	Raw hides and skins	0.00	0.64	0.03	0.16	0.03	0.00	0.06	0.00	0.22	0.16	4.57	0.98	0.51	0.03
44	Wood and articles of wood; wood ch	1.55	0.04	0.00	4.78	0.24	9.38	2.35	0.21	0.01	0.00	0.10	0.10	0.00	0.21
46	Manufactures of straw, esparto/othe	0.00	1.25	0.00	5.10	0.00	6.32	0.00	0.00	1.39	0.36	0.06	5.97	0.00	0.27
49	Printed books, newspapers, pictures	0.02	0.06	0.00	0.04	0.99	0.01	23.97	0.00	0.00	0.01	0.73	0.21	0.00	0.34

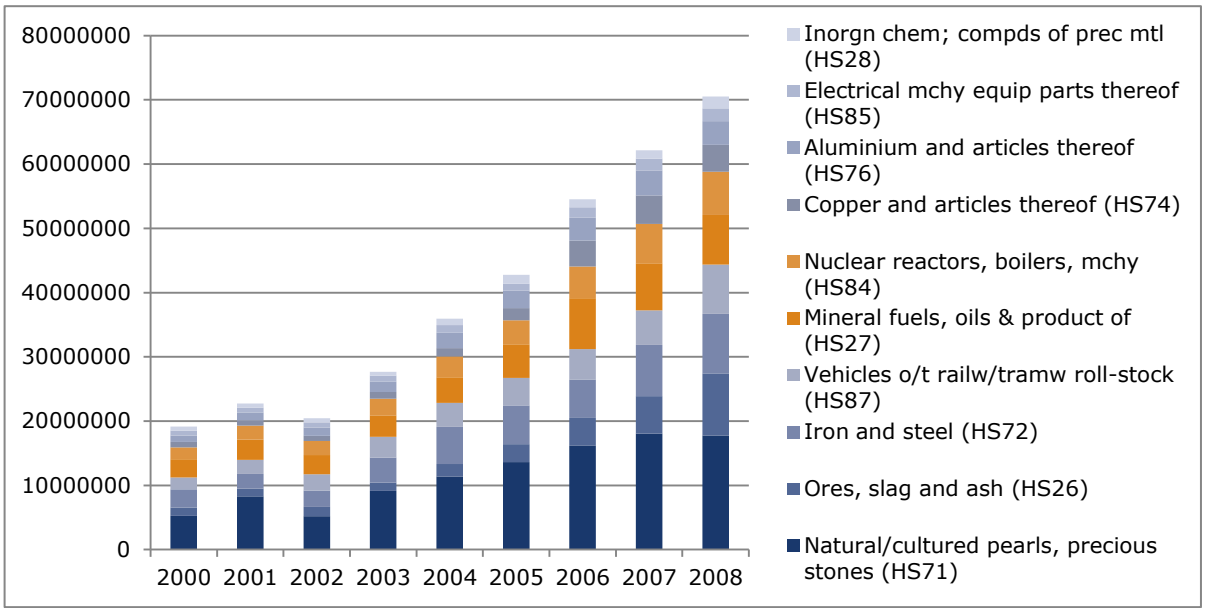
HS	Product	Benin	Burkina Faso	Cape Verde	Côte d'Ivoire	The Gambia	Ghana	Guinea	Guinea-Bissau	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
52	Cotton.	148.93	175.35	0.00	3.12	0.12	0.66	0.19	0.00	12.15	2.25	0.38	1.93	0.00	25.69
54	Man-made filaments.	0.00	0.00	0.00	0.01	86.40	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.34
55	Man-made staple fibres.	0.03	0.03	0.00	0.01	0.03	0.00	0.00	0.00	0.02	0.00	0.91	0.31	0.00	2.67
58	Special woven fab; tufted tex fab;	0.15	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
59	Impregnated, coated, cover/laminate	0.00	1.57	0.00	0.07	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02
61	Art of apparel & clothing access,	0.01	0.04	4.86	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.27
62	Art of apparel & clothing access, n	0.05	0.06	6.74	0.01	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.02	0.00	0.13
63	Other made up textile articles; set	0.01	4.14	0.00	0.58	2.33	0.61	0.01	0.00	0.04	2.98	0.02	1.41	0.00	0.64
64	Footwear, gaiters and the like; par	0.02	0.00	13.58	0.50	1.38	0.00	0.00	0.00	0.00	0.09	0.11	0.23	0.00	0.64
67	Prepr feathers & down; arti flower;	0.22	0.00	0.00	0.02	0.08	0.11	0.00	0.00	0.00	0.00	0.00	5.40	0.00	0.06
71	Natural/cultured pearls, prec stone	0.00	0.52	0.00	0.36	0.01	21.70	15.53	0.00	13.05	0.63	0.00	3.65	0.07	0.00
72	Iron and steel.	0.26	0.08	0.29	0.12	0.68	0.14	0.06	0.21	0.02	0.00	0.00	1.85	0.00	3.90
76	Aluminium and articles thereof.	0.01	0.03	0.01	0.05	0.23	1.15	0.00	0.00	0.00	0.00	0.13	0.22	0.34	0.14
82	Tool, implement, cutlery, spoon & f	0.00	0.02	0.00	0.67	0.01	0.15	0.06	0.00	0.01	0.03	0.01	0.11	14.52	0.23
85	Electrical mchy equip parts thereof	0.37	1.80	0.00	1.55	18.00	1.21	0.29	0.01	0.43	0.48	0.19	4.89	0.26	1.01
87	Vehicles o/t railw/tramw roll-stock	0.42	0.38	0.00	0.63	2.25	0.13	0.09	0.01	0.30	0.09	0.05	1.70	0.00	0.13
88	Aircraft, spacecraft, and parts the	0.00	0.65	0.00	1.00	0.00	0.04	0.00	0.00	0.01	0.00	0.03	5.34	0.00	0.00
96	Miscellaneous manufactured articles	0.07	0.01	0.00	0.37	0.03	1.01	0.01	0.00	0.00	0.00	0.00	0.33	30.31	0.02
97	Works of art, collectors' pieces an	0.24	1.88	0.00	0.22	0.01	0.05	0.04	0.00	0.02	0.04	0.00	0.45	0.05	0.13

Note: Data for Benin, Burkina Faso, and Guinea-Bissau are for 2005; Togo, 2007; Senegal, Cape Verde and the Gambia, 2009, all others, 2008. No data are available for Liberia. Shaded cells indicate those product lines with a revealed comparative advantage index score of more than one.

Source: Derived from data obtained from UN COMTRADE database.

Appendix 4: SADC trade and revealed comparative advantages

Figure E: Value of top ten SADC exports for period 2000-2008 (US$)



Source: Derived from data obtained from UN COMTRADE database.
Note: Based on available data.

Table D. Value of SADC exports for the period 2000-2008 (US$ millions)

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008
S. Africa	22,761	25,922	23,059	31,632	40,262	46,988	52,440	63,958	73,924
Zambia	890	986	956	980	1,576	1,810	3,770	4,595	5,071
Botswana	2,756	2,528	2,738	3,788	3,501	4,419	4,496	5,064	4,831
Namibia	1,319	1,398	1,277	1,298	2,421	2,491	3,364	4,021	4,706
Tanzania	656	763	901	1,132	1,337	1,540	1,711	1,965	3,062
Mozambique	362	680	778	1,036	1,496	1,745	2,344	2,394	2,454
Mauritius	1,490	1,521	1,755	1,862	1,925	1,413	2,174	2,050	2,087
Zimbabwe	1,925	1,190	2,211	n/a	1,926	1,394	6,378	3,170	1,580
Madagascar	698	799	588	813	889	738	928	1,194	1,541
Malawi	370	437	378	502	459	495	663	868	879
Seychelles	129	161	179	211	183	212	215	199	148
Lesotho	336	280	357	478	968	n/a	n/a	n/a	n/a
Swaziland	889	771	1,070	1,623	1,504	1,202	1,384	1,085	n/a
Total	**34,582**	**37,435**	**36,247**	**45,355**	**58,445**	**64,447**	**79,866**	**90,564**	**100,284**

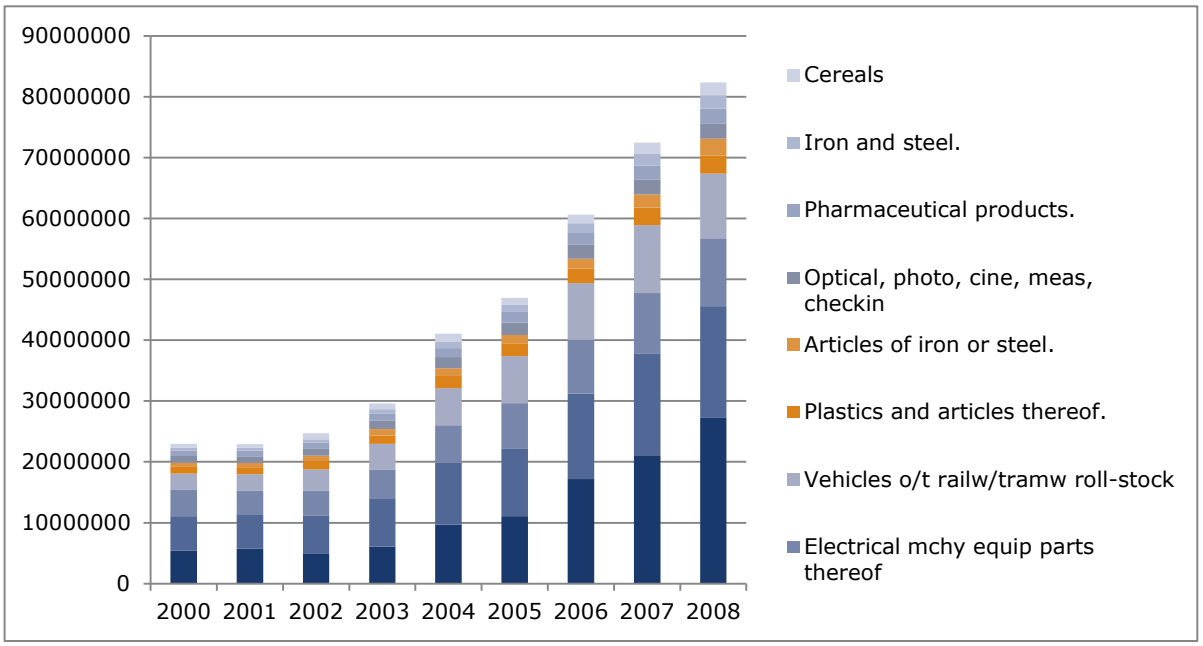
Source: UN COMTRADE database.
Note: Based on available data.

Table E: Value of SADC imports for the period 2000-2008 (US$ millions)

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008
S. Africa	24,455	23,440	23,861	31,301	43,546	50,234	62,801	74,053	81,303
Zambia	886	1,080	1,102	1,574	2,152	2,558	3,074	3,939	5,017
Botswana	2,008	1,732	3,231	3,819	3,118	3,072	3,033	3,967	5,052
Namibia	1,432	1,550	1,308	1,426	2,400	2,503	2,786	4,011	4,675
Tanzania	1,586	1,729	1,691	2,164	2,556	3,247	4,527	5,919	8,078
Mozambique	1,146	606	1,081	1,416	1,717	1,777	2,296	2,499	3,333
Mauritius	2,081	1,992	2,168	2,390	2,777	3,160	3,643	3,852	4,670
Zimbabwe	n/a	1,695	2,454	n/a	2,166	2,070	2,560	3,191	2,760
Madagascar	986	915	599	1,315	1,647	1,680	1,752	2,435	3,835
Malawi	532	562	695	785	929	1,165	1,207	1,378	2,204
Seychelles	342	435	420	412	496	675	757	859	818
Lesotho	540	518	759	1,003	979	n/a	n/a	n/a	n/a
Swaziland	1,084	931	1,035	1,431	1,746	1,631	1,214	1,258	n/a
Total	**37,079**	**37,184**	**40,405**	**49,037**	**66,230**	**73,770**	**89,649**	**107,362**	**121,745**

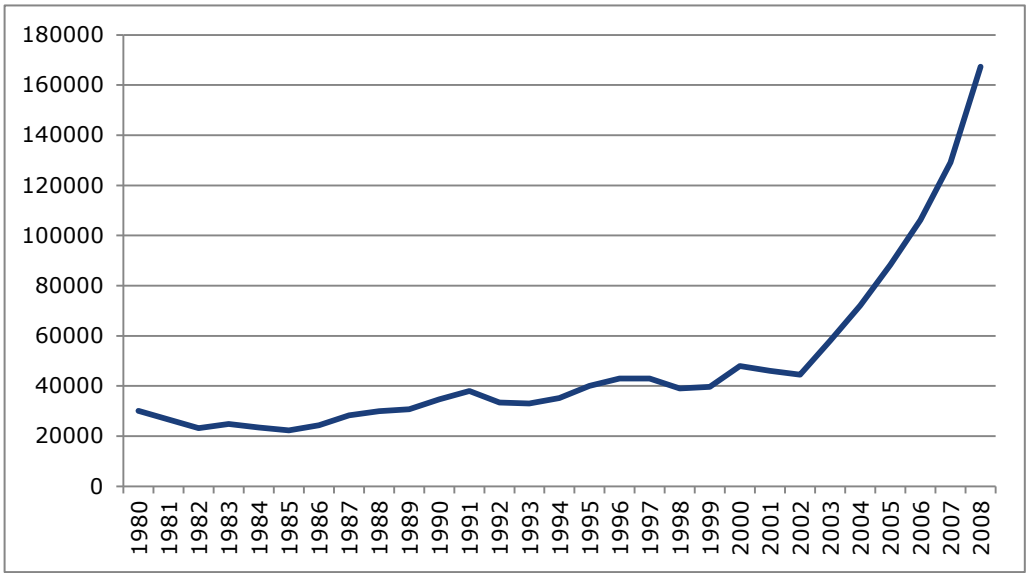
Source: UN COMTRADE database.
Note: Based on available data.

Figure F: Value of top ten SADC imports for the period 2000-8 (US$)



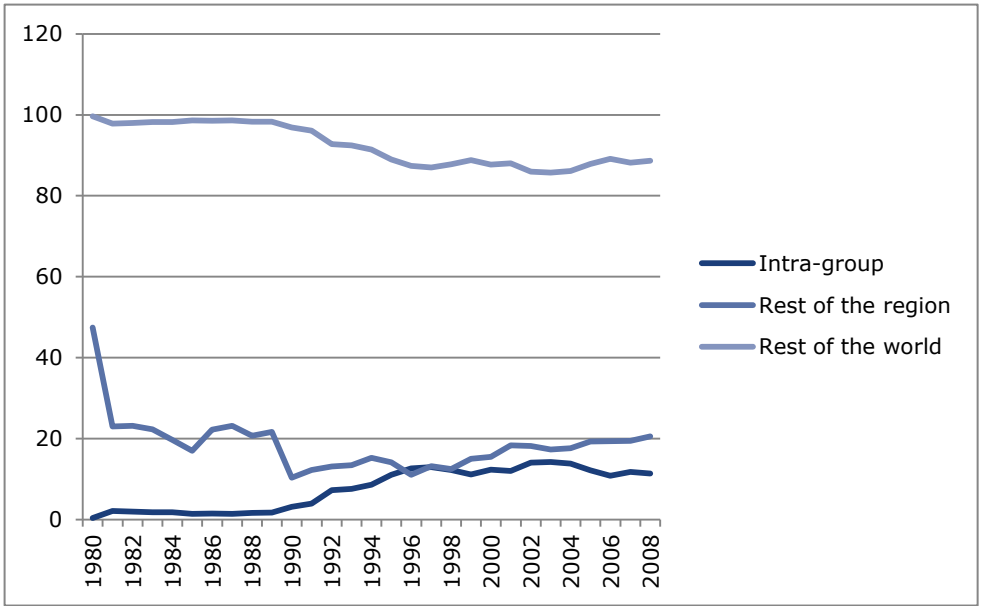
Source: Derived from data obtained from UN COMTRADE database.
Note: Based on available data.

Figure G. Total value of SADC exports, 1980-2008 (US$ million)



Source: UNCTAD 2009b.
Note: Countries included for each year are not clear

Figure H. Direction of SADC exports for period 1980-2008 (% by destination)



Source: UNCTAD 2009b.
Note: Countries included for each year are not clear

Table F. SADC RCA compared to rest of the world- other top products

HS	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
91	Clocks and watches and parts	2.0	1.8	1.9	2.2	2.1	2.4	2.6	2.2	2.8	2.7
95	Toys, games & sports requisites; pa	2.5	2.1	2.6	2.5	2.5	1.9	2.0	1.6	1.2	1.1
76	Aluminium and articles thereof.	2.6	3.0	3.3	3.3	3.8	4.0	3.7	3.5	3.2	2.2
80	Tin and articles thereof.	2.3	2.7	2.7	4.8	6.1	5.4	16.9	19.1	6.7	1.1
72	Iron and steel.	3.9	3.1	3.4	3.7	3.4	3.2	2.5	2.6	2.5	3.5
41	Raw hides and skins (other than fu	2.5	1.7	2.0	1.4	1.5	1.4	1.3	1.4	1.3	1.4
47	Pulp of wood/of other fibrous cellu	3.9	3.1	3.0	3.4	2.9	2.7	2.4	2.0	2.0	2.4
49	Printed books, newspapers, pictures	1.2	1.4	0.6	1.2	1.6	2.3	2.2	3.1	3.2	2.1
51	Wool, fine/coarse animal hair, hors	2.5	2.2	2.7	2.8	2.4	2.4	2.5	2.9	2.9	3.6
52	Cotton.	2.4	1.7	2.0	1.0	2.3	1.5	1.2	1.1	1.5	1.5
53	Other vegetable textile fibres; pap	0.6	0.7	0.8	0.8	0.9	0.8	0.8	0.9	1.9	1.8
28	Inorgn chem; compds of prec mtl, r	2.7	2.3	2.7	1.9	2.6	3.1	2.2	2.0	2.2	1.9
31	Fertilisers.	2.1	1.6	1.9	1.5	1.4	1.1	0.9	0.8	0.8	1.0
25	Salt; sulphur; earth & ston; plaste	3.1	2.2	3.1	1.7	3.3	1.7	1.8	1.9	1.8	2.1
10	Cereals	0.6	0.7	1.0	0.8	0.6	1.0	0.6	0.5	1.0	1.1
11	Prod.mill.indust; malt; starches;	2.5	2.0	2.8	1.7	1.5	3.0	1.1	1.4	1.6	2.0
14	Vegetable plaiting materials; veget	1.6	2.4	3.6	2.9	2.3	2.1	3.6	2.8	2.6	2.5
16	Prep of meat, fish or crustaceans,	2.3	2.3	2.6	2.4	2.2	2.2	2.1	2.1	1.5	1.0
17	Sugars and sugar confectionery.	9.9	8.7	8.0	7.6	7.4	6.8	6.2	5.3	3.5	3.7
20	Prep of vegetable, fruit, nuts or o	2.2	1.6	2.0	2.0	1.8	1.7	1.4	1.1	1.1	1.5
22	Beverages, spirits and vinegar.	2.3	2.1	2.4	2.6	2.3	2.4	1.8	1.9	2.0	2.1
03	Fish & crustacean, mollusc & other	3.3	3.3	4.0	3.6	3.1	2.9	3.0	2.9	2.9	1.9

Source: Derived from data obtained from UN COMTRADE database.

Note: Based on available data.

Table G: RCAs for SADC members compared to rest of the world

HS	Product	Bots-wana	Lesotho	Mada-gascar	Malawi	Mauritius	Mozam-bique	Namibia	Sey-chelles	Swazi-land	South Africa	Tan-zania	Zambia	Zim-babwe
01	Live animals	0.08	0.01	0.17	0.16	11.38	0.18	10.28	0.10	0.87	0.38	0.34	0.21	0.37
02	Meat and edible meat offal	2.76	0.01	0.00	0.00	0.00	0.00	4.91	0.00	0.22	0.26	0.01	0.02	0.02
03	Fish & crustacean, mollusc & other	0.00	0.00	16.03	0.07	6.31	8.89	21.97	62.30	0.01	1.25	7.69	0.04	0.17
05	Products of animal origin, nes or	3.62	0.00	0.29	0.00	5.79	0.83	0.97	0.00	0.12	0.48	3.14	0.00	0.01
06	Live tree & other plant; bulb, root	0.00	0.00	0.07	0.18	1.92	0.03	0.05	0.00	0.01	1.14	12.46	0.28	165.82
07	Edible vegetables and certain roots	0.02	0.00	2.35	5.68	0.05	8.72	0.84	0.00	0.42	0.25	6.05	1.37	0.36
08	Edible fruit and nuts; peel of citr	0.00	0.00	2.81	1.32	0.15	6.13	1.57	0.67	1.05	6.01	6.40	0.02	0.26
09	Coffee, tea, matï and spices.	0.02	0.01	43.70	21.76	0.34	1.56	0.07	0.62	0.08	0.33	30.18	0.90	2.09
10	Cereals	0.04	0.41	0.03	2.25	0.08	0.84	0.03	0.00	0.20	1.23	0.25	0.76	0.03
11	Prod.mill.indust; malt; starches;	0.08	13.33	0.02	1.47	4.75	10.16	0.71	0.00	2.55	1.53	4.17	4.40	0.02
12	Oil seed, oleagi fruits; miscell gr	0.03	0.04	0.63	5.23	0.01	6.28	0.13	0.00	0.24	0.48	5.02	0.30	0.83
13	Lac; gums, resins & other vegetable	0.06	0.00	16.66	0.00	0.00	0.90	0.02	0.00	6.79	0.18	0.55	0.00	0.01
14	Vegetable plaiting materials; veget	0.00	0.00	67.87	6.86	0.01	0.00	0.14	0.00	0.05	0.27	4.38	15.77	3.40
16	Prep of meat, fish or crustaceans,	0.09	0.00	7.30	0.00	37.30	0.02	2.07	225.59	0.07	0.25	0.06	0.02	0.02
17	Sugars and sugar confectionery.	1.16	0.01	5.79	27.99	36.91	14.55	0.86	0.00	79.78	2.21	0.43	7.08	10.74
18	Cocoa and cocoa preparations.	0.00	0.00	6.28	0.00	0.03	0.00	0.42	0.00	2.36	0.33	2.86	0.05	0.01
19	Prep.of cereal, flour, starch/milk;	0.46	0.02	0.07	0.29	1.10	0.05	0.31	0.00	0.15	0.29	0.14	0.47	0.24
20	Prep of vegetable, fruit, nuts or o	0.03	0.02	2.66	0.46	0.04	0.00	0.16	0.00	6.27	1.83	0.20	0.05	0.17
22	Beverages, spirits and vinegar.	0.30	4.65	0.13	0.86	0.65	0.26	5.06	0.02	1.93	2.50	0.41	0.14	0.29
23	Residues & waste from the food indu	0.24	0.29	0.00	0.56	2.84	4.30	1.16	3.46	2.11	0.19	2.30	0.42	0.97
24	Tobacco and manufactured tobacco su	0.71	0.01	0.02	291.10	1.50	51.65	4.26	0.00	0.01	1.51	12.41	7.65	46.39
25	Salt; sulphur; earth & ston; plaste	1.24	0.16	2.56	0.49	0.28	1.57	4.71	0.00	0.02	1.63	3.70	3.69	11.05
26	Ores, slag and ash.	4.26	0.00	1.82	0.00	0.00	4.68	17.63	0.00	0.00	11.00	17.50	11.34	8.37
27	Mineral fuels, oils & product of th	0.03	0.00	0.43	0.00	0.00	2.54	0.03	0.00	0.06	0.98	0.07	0.08	0.08
28	Inorgn chem; compds of prec mtl, r	0.27	0.00	0.02	0.01	0.10	0.07	0.20	0.00	2.53	2.21	0.07	0.96	0.44
29	Organic chemicals.	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	1.28	0.64	0.01	0.02	0.00
31	Fertilisers.	0.03	0.00	0.00	0.00	1.10	0.04	0.03	0.00	0.13	1.04	3.15	0.39	0.18
33	Essential oils & resinoids; perf,	0.03	0.00	2.29	0.02	0.71	0.10	0.19	0.00	43.87	0.53	0.26	0.28	0.02
34	Soap, organic surface-active agents	0.03	0.07	0.02	1.27	0.86	0.13	1.15	0.00	0.33	0.80	1.46	0.82	0.04
36	Explosives; pyrotechnic prod; match	2.73	0.00	0.00	0.00	0.04	0.04	0.79	0.00	0.01	5.10	0.42	7.24	0.00
38	Miscellaneous chemical products.	0.02	0.00	0.00	0.02	0.12	0.03	0.04	0.00	13.97	0.74	0.02	0.15	0.03
41	Raw hides and skins (other than fu	0.59	0.04	1.20	0.47	0.03	0.08	2.14	0.00	0.20	1.45	1.29	1.03	2.78
42	Articles of leather; saddlery/harne	0.03	0.00	2.38	0.00	2.06	0.00	0.08	0.00	0.00	0.08	0.01	0.00	0.05
43	Furskins and artificial fur; manuf	0.03	0.00	0.00	0.00	0.00	0.00	3.57	0.00	0.01	0.20	3.63	0.00	0.00
44	Wood and articles of wood; wood ch	0.04	0.02	4.02	1.48	0.08	3.22	0.24	0.11	2.65	0.61	1.29	0.19	1.36
46	Manufactures of straw, esparto/othe	0.02	0.01	22.59	0.15	0.30	10.20	0.11	0.00	3.33	0.21	0.11	0.00	0.07

HS	Product	Bots-wana	Lesotho	Mada-gascar	Malawi	Mauritius	Mozam-bique	Namibia	Sey-chelles	Swazi-land	South Africa	Tan-zania	Zambia	Zim-babwe
47	Pulp of wood/of other fibrous cellu	0.06	0.00	0.01	0.02	0.06	0.03	0.09	0.00	23.55	2.96	0.01	0.03	0.03
49	Printed books, newspapers, pictures	0.07	0.00	1.21	0.66	1.41	5.40	52.19	0.01	4.32	0.28	0.16	0.40	50.73
50	Silk.	0.00	8.73	0.01	0.00	0.07	0.00	0.00	0.00	0.06	0.02	0.34	0.00	0.00
51	Wool, fine/coarse animal hair, hors	0.02	4.73	0.00	0.00	8.98	0.00	0.04	0.00	0.01	4.29	0.05	0.00	0.00
52	Cotton.	0.00	0.26	4.65	8.37	4.17	5.70	0.03	0.00	0.15	0.14	11.61	2.93	14.41
53	Other vegetable textile fibres; pap	0.01	0.00	9.42	0.22	0.08	19.40	0.00	0.00	0.07	0.11	27.93	0.05	0.00
55	Man-made staple fibres.	0.08	0.00	0.02	0.00	1.07	0.00	0.00	0.00	0.42	0.09	0.13	0.01	0.16
56	Wadding, felt & nonwoven; yarns; tw	0.03	0.02	3.94	0.00	0.04	0.04	0.24	0.03	0.00	0.37	8.21	0.01	0.52
57	Carpets and other textile floor co	0.38	0.02	0.02	0.44	1.12	0.00	0.05	0.00	0.07	0.49	0.01	0.00	0.01
58	Special woven fab; tufted tex fab;	0.10	0.00	2.23	0.00	3.75	0.00	0.05	0.00	0.03	0.18	0.02	0.00	0.01
60	Knitted or crocheted fabrics.	0.07	0.05	0.02	13.71	3.42	0.00	0.07	0.00	0.05	0.04	0.91	0.00	0.03
61	Art of apparel & clothing access,	2.48	25.35	15.41	1.23	19.39	0.00	0.07	0.00	4.74	0.05	0.18	0.00	0.01
62	Art of apparel & clothing access, n	2.27	28.07	15.83	1.38	10.69	0.03	0.02	0.00	3.89	0.06	0.03	0.00	0.14
63	Other made up textile articles; set	0.65	0.04	0.58	0.64	0.63	0.16	0.60	0.00	0.05	0.33	5.09	0.06	1.09
64	Footwear, gaiters and the like; par	0.07	3.63	0.01	0.02	0.04	0.00	0.08	0.00	0.01	0.06	0.21	0.07	0.04
65	Headgear and parts thereof.	0.16	0.01	2.03	0.12	0.34	0.01	0.14	0.00	0.01	0.18	0.20	0.01	0.39
66	Umbrellas, walking-sticks, seat-sti	0.03	15.12	0.20	0.01	0.24	0.00	0.04	0.00	0.06	0.23	0.05	0.00	0.00
67	Prepr feathers & down; arti flower;	0.02	0.00	0.01	0.00	0.01	7.81	0.05	0.00	0.01	0.17	0.00	0.01	0.07
68	Art of stone, plaster, cement, asbe	0.12	2.68	0.07	0.01	0.41	0.02	0.13	0.00	0.20	0.36	0.02	0.07	0.26
71	Natural/cultured pearls, prec stone	31.66	6.92	0.44	0.01	1.58	0.21	9.71	0.00	0.00	6.32	12.00	0.37	2.40
72	Iron and steel.	0.09	0.00	0.18	0.01	0.20	0.45	0.09	0.00	0.05	4.33	0.20	0.08	0.88
74	Copper and articles thereof.	0.24	0.00	0.10	0.00	0.16	0.14	3.30	0.01	0.05	1.22	0.25	91.65	0.13
75	Nickel and articles thereof.	67.24	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.00	2.74	0.00	0.00	56.27
76	Aluminium and articles thereof.	0.02	0.00	0.03	0.01	0.60	0.03	0.05	0.10	0.03	2.64	0.19	0.01	0.13
79	Zinc and articles thereof.	0.17	0.00	0.12	0.00	0.03	6.25	0.01	0.00	0.00	0.59	1.16	1.25	0.00
80	Tin and articles thereof.	0.10	0.00	0.07	0.00	0.37	0.02	131.42	0.00	0.04	1.27	0.22	0.04	0.16
82	Tool, implement, cutlery, spoon & f	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.39	0.01	4.68	0.00
86	Railw/tramw locom, rolling-stock &	3.61	12.62	7.95	0.86	3.54	3.12	3.06	0.37	0.08	9.59	11.23	3.61	2.72
88	Aircraft, spacecraft, and parts the	0.53	0.01	0.07	0.65	0.06	1.62	2.16	0.06	0.06	6.84	0.39	0.53	0.12
89	Ships, boats and floating structure	0.04	0.00	0.00	0.01	0.26	1.97	0.02	0.82	0.00	0.51	0.16	0.09	0.30
91	Clocks and watches and parts thereo	0.21	0.48	1.49	0.49	6.24	3.12	0.81	7.93	0.02	3.05	0.95	0.13	0.05
92	Musical instruments; parts and acce	0.18	0.00	11.97	0.00	12.75	0.04	0.14	0.00	0.06	0.11	0.08	0.00	0.00
95	Toys, games & sports requisites; pa	0.08	0.07	0.12	0.63	0.53	0.26	1.39	0.04	0.54	1.24	0.14	0.07	0.96
96	Miscellaneous manufactured articles	0.01	0.00	1.49	0.07	1.59	0.04	0.14	0.00	0.01	0.31	0.04	0.01	0.12
97	Works of art, collectors' pieces an	0.03	0.01	1.66	0.07	2.70	0.01	0.13	0.00	8.32	0.25	0.09	0.23	0.30

Note: Data for Lesotho is 2004; Swaziland is 2006; Malawi, Namibia and Seychelles is 2008, all others is 2009. Shaded cells indicate those product lines with a revealed comparative advantage index score of more than one.

Source: Derived from data obtained from UN COMTRADE database.

Appendix 5: Quantitative Assessment of NTBs on Trade, SADC

Box A: Estimating the Welfare Impact of NTBs

Price differentials

Like a tariff or indeed any other tax or subsidy, NTBs will cause the price of a good either to increase or to decrease. Because the removal of tariffs, and resultant price and welfare impacts, is simply easier to conceptualise as well as analyse, the preferred measure of NTBs is their translation into a price equivalent. One of the common features of all NTBS is their effect on prices; hence estimations of what domestic prices would be in the absence of NTBs may be derived from a comparison of 'foreign' with 'domestic'. A simple price comparison can pick up the net effects of all NTBs that are present in a market without it being necessary for the investigator actually to define what those are.

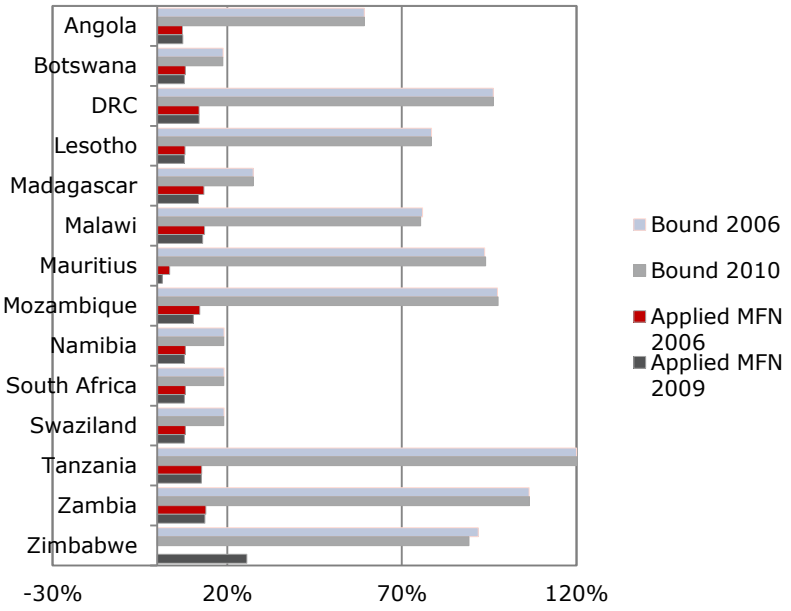
Authors such as Kee et al. (2004, 2006, 2008) have estimated the *ad valorem* price equivalents for a number of NTBs across countries. Their estimates are based on the information registered with the TRAINS database in addition to that included in most recent WTO TPRs. These estimates are available for a number of countries within SSA, but for only one year per country – and that year is different across countries, thus making cross-country analysis using these data, challenging.

Quantity differentials

Some authors argue that the focus on analysis of price differentials which may result from NTBs obscures the real issue of analysis – impacts on quantities produced and/or consumed. Moreover, it is argued that analysis of price differentials requires a lot of information on the relationships between prices and quantities, which requires the estimation of elasticities of demand and supply. In cases where this information is simply not available, some authors prefer to make use of gravity trade models in order to estimate what the volume of imports would be, predicted on the basis of factor endowments and levels of income. The actual measurement of an NTB therefore becomes the residual from a regression analysis or assumes its significance as a dummy variable. This measure is limited by its over-reliance on a model to explain real world trade flows, any deviation of which may be considered to be reflective of the presence of NTBs, when in reality this is not likely to be the case.

Source: Adapted from Deardorff and Stern (1998).

Figure I: Bound and applied tariffs among SADC countries



Source: WTO World Tariff Profiles, http://www.wto.org/english/res_e/reser_e/tariff_profiles_e.htm

Table H: Results of GMM regressions according to sectoral aggregation (2)

	(1)	(2)
	diff GMM	**diff GMM**
	SADC	**Non SADC**
NTM dummy (full coverage)	-1.615*	-0.182
	(0.902)	(0.299)
Year Effects	YES	YES
Importer-product-exporter effects	YES	YES
NTM x Sector dummies	YES	YES
Observations	76,500	351,708
Nr. of groups	33,122	174,678
R-squared (within)		
Wald test	279.16	144.03
Sargan overid. Test	46.02	15.18

Note: Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%. Dependent variable is the percentage growth of imports over the previous year. Importing countries are Botswana, Namibia, South Africa and Swaziland. Endogenous variable in GMM estimations are the NTM variable and the NTM-sectoral interaction terms.

Table I: Sectoral aggregations

	(1)	(2)
	HS Chapter	**HS Chapter**
Sector 1	0-27	0-27
Sector 2	28-40	28-38
Sector 3	41-49	39-49
Sector 4	50-67	50-63
Sector 5	67-83	64-71
Sector 6	83-99	72-99

Box B: Robustness Checks for Regression analysis

We check the robustness of our results to the use of different dependent and independent variables. First, we use the simple logarithmic transformation to calculate the dependent variable, which automatically excludes zero import values from the sample. The results presented in Table 1 show that the coefficient of the NTM dummy is 50% larger for the SADC sample (column 1) but with same effects in the non-SADC sample (column 2). Another robustness test concerns the way in which the NTM variable is coded. We have used a dummy variable so far, thus assuming no extra effect of extra measures in any sector after the first one. In columns 3 and 4, we use the log of the continuous NTM variable (plus one to avoid turning the zeros into missing values) as the main regressor. The results are again qualitatively unaffected with negative and significant impact for SADC countries (column 3) and positive and significant for the others (column 4).

Table 1: The impact of NTMs on imports in Southern Africa, robustness

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Method	**diff GMM**	**diff GMM**	**diff GMM**	**diff GMM**	**diff GMM**	**diff GMM**	**diff GMM**	**diff GMM**
Sample	**SADC**	**Non SADC**	**SADC**	**Non SADC**	**SADC**	**Non SADC**	**SADC**	**Non SADC**
Dep. Var.	**Δ Imp**	**Δ Imp**	**Δ Imp**	**Δ Imp**	**Δ Imp**	**Δ Imp**	**Δ Imp**	**Δ Imp**
Zeros included	**NO**	**NO**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
NTM dummy (full	-3.015***	0.234						
Ln NTM (full coverage)	(0.808)	(0.148)						
			-4.509***	0.359***				
NTM dummy (any coverage)			(0.858)	(0.118)				
					-0.430***	0.048***		
Ln NTM (full coverage)					(0.090)	(0.021)		
							0.168	0.223
Ln NTM (part. coverage)							(0.236)	(0.164)
							0.838***	-0.043
							(0.202)	(0.163)
Year Effects	YES	YES	YES	YES	YES	YES	YES	YES
Imp-prod-exp effects	YES	YES	YES	YES	YES	YES	YES	YES
Observations	30,086	98,522	76,500	351,708	76,500	351,708	76,500	351,708
Nr. of groups	13,195	54,403	33,122	174,678	33,122	174,678	33,122	174,678
Wald test			293.61	186.60	373.15	177.75	352.81	195.87
Sargan overid. Test			0.58	1.28	31.95	15.97	27.83	16.52

Note: Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%. Dependent variable is the percentage growth of imports over the previous year. Importing countries are Botswana, Namibia, South Africa and Swaziland.

The final robustness checks we perform are based on limiting the extent to which results may be affected by omitted variables. In Table 2 we include time-varying fixed effects for each partner country. These create a large number of extra control variables which substantially increases the number of elements in the matrix of coefficients making the computation very cumbersome in the case of the non-SADC sample (with more trading-partner countries than the SADC). To minimise this problem, we take different random samples of non-SADC partner countries to check the robustness of the results to the inclusion of partner-year fixed effects. The results indicate that there is no major difference in the NTM coefficient between the estimation with partner-year fixed effects (odd columns) and without these effects (even columns) as shown by the 95% confidence interval reported in the table.

Table 2: The impact of NTMs on imports in Southern Africa, further robustness

	(1)	(2)	(3)	(4)	(5)	(6)
	diff GMM	**diff GMM**	**diff GMM**	**diff GMM**	**diff GMM**	**diff GMM**
	SADC	**SADC**	**No SADC**	**No SADC**	**No SADC**	**No SADC**
NTM dummy (full coverage)	-1.681***	-2.011***	0.090	0.011	0.047	-0.102
	(0.209)	(0.223)	(0.266)	(0.235)	(0.198)	(0.174)
95% conf. inter.	[-2.09;-1.27]	[-2.44;-1.57]	[-0.43; 0.61]	[-0.45; 0.47]	[-0.34; 0.43]	[-0.44; 0.24]
Year Effects	YES	YES	YES	YES	YES	YES
Imp.-prod-exp effects	YES	YES	YES	YES	YES	YES
Partner-year eff.	YES	NO	YES	NO	YES	NO
Partner codes	SADC	SADC	21-49	21-49	100-130	100-130
Observations	55,988	55,988	34,766	34,766	46,568	46,568
Nr. of groups	27,994	27,994	17,383	17,383	23,284	23,284

Note: Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%. Dependent variable is the percentage growth of imports over the previous year. Importing countries are Botswana, Namibia and South Africa. Swaziland is excluded to reduce the number of years over which the estimation is performed.

Appendix 6: Non-tariff barriers in SADC

Table J: NTBs identifiable in most recent TPRs by type and prevalence

	1. Price Control	2. Finance Control	3.Quantity Restrictions	4.Monopolistic Measures	5.Technical Measures	6. Misc. i.e. subsidies.
Angola (2006)	Bread, petroleum, textiles and clothing, shoes and other agric.		All importers and exporters require a licence.	SOEs in: manufacturing, engineering, utilities, trading, finance, broadcasting and telecommunications.	Customs processing fees for goods > $1000, in addition to inspection charges.	Export duties levied on ivory, scrap, hides and skins.
Botswana (2009)	Petroleum, water, electricity		QRs on dairy, poultry, grains, vegetables. Import permits for industrial goods from outside SACU (except from Malawi and Zimbabwe). Licences required for all exports. Other import prohibitions in place. Export prohibitions on: precious woods and stone.	Botswana Meat Commission has a statutory monopoly on beef exports. De facto monopoly on diamond exports. Number of SOEs with de facto or de jure monopolies on public utilities.		Infant Industry Protection: Milk and Flour. VAT difference between SACU and Non-SACU imports. Textiles and automotive industries have access to import duty credit schemes.
DRC	NA					
Lesotho (2009)	Oil, electricity.		All goods imported from outside SACU require a licence. Livestock and related products are subject to export controls. Only licensed dealers can export diamonds.			Rebate on import duties for intermediate goods for export.
Madagascar (2008)			Import permits required for: diamonds, gemstones, gold and platinum, vanilla, leaf tobacco, lubricants. Export licences required for: metals, minerals, petroleum, wild animals, maize and related products, tobacco, tea, cotton, scrap metal, soya beans and rice. Import prohibitions on horticultural products and tobacco. Other export prohibitions include: metals, petroleum, maize, rice (some of which maybe temporary). Export prohibitions on rough or semi-finished wood.	SOE monopolies for: cotton lint, chromium, electricity, water, telecommunications and rail.		Charges levied on imports of sugar, wheat, flour, some chemicals and cigarettes for the purpose of protecting local industry. Taxable base higher for imports than exports. Other charges levied on exports of: fisheries, worked wood, mining products and other fauna and flora.
Malawi	Agricultural products:		Non-automatic licences for agric.			Variable excise duties

	1. Price Control	2. Finance Control	3.Quantity Restrictions	4.Monopolistic Measures	5.Technical Measures	6. Misc. i.e. subsidies.
(2010)	maize, tobacco, cotton.		Products and as necessary for infant industry protection. All imports require a licence.			across products; rationale unclear. Export surrender requirements in place for: tobacco, tea and sugar. Export incentives in place for non-traditional goods.
Mauritius (2008)			Import permits required for: milk, canned food products, plastic and rubber items, diamonds and apparatus in addition to animal foodstuffs, meat, tobacco and tea. Import of some types of second hand goods is prohibited as well as black tea. Export permits required for fish products, sugar, tea and other agric. products and those considered strategic.	Monopoly on sugar imports.		Excise duties levied on plastic products and tea.
Mozambique (2009)	Sugar and minimum purchase prices for: cashews, tobacco and cotton. Fuel prices regulated.		Exports of some types of unprocessed wood prohibited.	Sugar cartel. State trading boards include: meat, agricultural, tobacco and other state trading corporation.		Import surcharges applic. to: sugar, cement, steel products. Export taxes on: raw cashews. Other charges on exports of: cotton, fish, mining and wood products.
Namibia (2009)	Petrol, diesel, paraffin. Other commodities.		Seasonal import prohibitions on controlled goods: maize, wheat, millet. Other import restrictions levied on horticulture, milk, pasta and wheat. Non-automatic import licences for: fish, meat and second-hand goods. Other export restrictions on wheat and flour, inc. licensing.	SOE monopoly public utility providers, inc. telecommunications and transportation.		Infant Industry Protection: horticulture, milk, pasta and wheat. Processing requirements for some agricultural exports and diamonds.
Seychelles	NA					
Swaziland (2009)	Bread, sugar, dairy products, gasoline, postal and telecomms.		QRs on agricultural produce, levies and quotas based on balance of local production. Import licences used. Import prohibitions ad hoc and seasonal. Sugar export tax. Import levies on dairy, agric. produce, petrol and diesel.	Number of SOEs operating under a monopoly/exclusive rights: maize, sugar, citrus, cotton and dairy.		Infant Industry protection use, inc. milk, dairy, vegetables, flour and wheat.
South Africa	Guideline prices for		QRs on: agricultural products, textiles	SOE and monopoly on	Fragmented regulatory	Other duties applied to

	1. Price Control	2. Finance Control	3.Quantity Restrictions	4.Monopolistic Measures	5.Technical Measures	6. Misc. i.e. subsidies.
(2009)	agricultural products (>5% of actual price)		and clothing, administered through import licences. Quotas allocated to firms based on size, age and ownership. Import and export prohibitions prescribed on an ad hoc basis. Imports of meat and some alcoholic beverages require a licence. Restriction on imports of used goods.	public utilities. Export of indirect-consumption raw sugar by de facto monopoly.	system and no coordinated system for establishing technical regulations. Other SPS based on international standards, but more stringent for agric. products which are subject to tech and quality standards.	exports to promote local processing, such as diamonds.
Tanzania (2006)			Permits required for imports of certain food items. Certain exports require licence/permits: food, fish, forestry, wildlife, minerals/gemstones. Export restrictions applied for certain food items in times of scarcity.		Customs processing fees, in addition to inspection charges.	Export taxes on cashew nuts and raw hides.
Zambia (2009)			Import licences required for certain agric. products. Export prohibitions apply to grains on a seasonal basis. Permits required for exports of: fertiliser, live animals and gemstones.			Export levy on copper concentrates and cotton seed.
Zimbabwe	NA					

Source: Most recent WTO *Trade Policy Reviews* for each country.

Table K: Number of NTBs reported to Tripartite Monitoring Mechanism, 21 January 2009 to 8 June 2010

Imposing country	**Reporting country**																				
	Angola	*Botswana*	*DRC*	*Egypt*	*France*	*Kenya*	*Lesotho*	*Madagascar*	*Malawi*	*Mauritius*	*Mozambique*	*Namibia*	*Rwanda*	*Seychelles*	*South Africa*	*Swaziland*	*Tanzania*	*Uganda*	*Zambia*	*Zimbabwe*	***Total***
Angola												7			2						**9**
Botswana		3			1				1			5		3	9				1	5	**28**
Burundi																1					**1**
DRC			10									2					1				**13**
Egypt																		2			**2**
Eritrea						1															**1**
Ethiopia						2															**2**
Kenya				1						2			1				8		1		**13**
Lesotho					1		6								4					3	**14**
Madagascar								3		1						1					**5**
Malawi						2			15						7					8	**32**
Mauritius															2		1				**3**
Mozambique									4	1	6					3			1	5	**20**
Namibia												31			5						**36**
Rwanda					2	1															**3**
Seychelles														11	3	2					**16**
South Africa	2	4						2	5	3	3	9			4	1	1		6		**40**
Sudan				1		1															**2**
Swaziland		1													2	10					**13**
Tanzania					1					3					1		12		2		**19**
Uganda						2										1					**3**
Zambia						2			3			11			1		2		7	7	**33**
Zimbabwe				1					2			1			6				2	12	**24**
Total	**2**	**8**	**10**	**3**	**5**	**11**	**6**	**5**	**30**	**10**	**9**	**66**	**1**	**14**	**46**	**19**	**25**	**2**	**20**	**40**	**332**

Source: http://ntb.africonnect.com/startreport.php