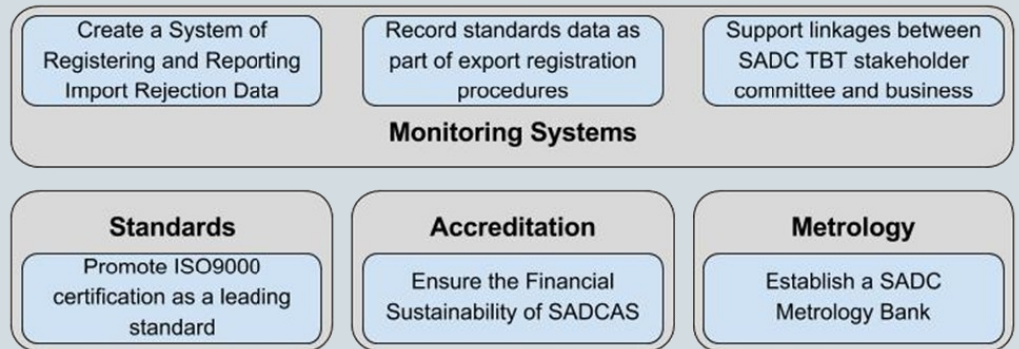![TIPS logo — TRADE & INDUSTRIAL POLICY STRATEGIES]

A practical agenda for reducing technical barriers to trade in SADC

OVERVIEW

This policy brief provides context for technical regulation in the region. It then offers some cross-cutting solutions for developing monitoring mechanisms that can allow policymakers to identify problem areas, and some specific interventions for the Standards, Accreditation and Metrology functions that can build capacity at low cost. It provides some recommendations for a practical agenda on reducing Technical Barriers to Trade (TBTs) in the Southern African Development Community (SADC) – ones that can be executed with minimal cost, and that improve the institutional capacity of regional organisations to grapple with the complexity inherent to the field. Above all, these regulations will need to be carefully attuned to assure that they provide the maximum protection for the region from dangerous substandard imports, while still allowing for a dynamic, mutually beneficial trading relationship.

Recommendations for improved technical infrastructure use

Create a System of Registering and Reporting Import Rejection Data

Record standards data as part of export registration procedures

Support linkages between SADC TBT stakeholder committee and business

Monitoring Systems

Standards
Promote ISO9000 certification as a leading standard

Accreditation
Ensure the Financial Sustainability of SADCAS

Metrology
Establish a SADC Metrology Bank

INTRODUCTION

A product exported from South Africa to the United States, and sourcing components from Zambia and Tanzania, could encounter any of over 31 000 standards — each requiring specialist scientific or process knowledge, and demanding its own form of testing and cer-tification. Most of those standards will cause exporters no problems, but a select few risk blocking firms from entering new markets or joining value chains.

Identifying and quickly resolving these problem areas is essential to facilitating regional integration and export-led growth. This is a daunting task for Southern Africa, given the overwhelming complexity of the field, and the tight capacity constraints facing the region's Standards, Quality, Accreditation, and Metrology (SQAM) bodies. Arguably the central challenge facing efforts to combat TBTS in SADC is overcoming immense complexity with minimal capacity.

TECHNICAL REGULATION

Technical regulations refer to product and process specifications, whether voluntary (standards) or legally required (compulsory specifications). Increasingly, the field also includes private standards set by firms for their suppliers. These are often the most important standard in value chains. Complying with technical regulations can facilitate access to export markets, allow firms to join value chains, and improve the competitiveness of firms.

Firms that cannot meet these standards, or access credible certification of their compliance, can be excluded from export markets. These blockages are broadly referred to as Technical Barriers to Trade.

The institutional infrastructure behind technical regulation comprises four key components. At the centre are testing laboratories (usually private entities) that undertake the process of certifying firms as compliant with a standard or requirement.

The activities of the testing labs are facilitated by three core public institutions: standards bodies (which develop standards and compulsory specifications), accreditation bodies (which certify that testing laboratories can legally grant compliance certification), and metrology organisations (which maintain the accuracy of measurement equipment) (see Figure 1). Weaknesses in any of these three public functions undermine the capacity of laboratories to do their jobs and create technical blockages for firms that are trying to trade.

All three public functions are undertaken primarily at the national level, but they are complemented by extensive cooperation at regional (Southern Africa), continental (Africa), and international level. Regional organisations play a facilitating role in smoothing national differences in standards and compulsory requirements and by assuring recognition of other member states' accreditation and metrology functions. Technical barriers to trade are diminished when a country has operational domestic technical infrastructure allied to functional regional cooperation efforts.

TECHNICAL REGULATION IN SADC

Technical regulations have grown rapidly in recent years (see Figure 2), with strict requirements being imposed in vital global export markets such as the European Union, United States and China.

Many of these new standards can be extremely challenging. Changes to EU aflatoxin regulations that were proposed in 1998, for example, initially threatened to block 64% of African agriculture exports to the EU, costing the continent $670 million in annual trade – until subsequent lobby efforts managed to contain this impact.[1]

[1] Otsuki, T. and Sewadeh, M. 2001. *Saving Two in a Billion: Quantifying the Trade Effect of European Food Safety Standards on African Exports.* Food Policy 26 (2001) 495–514.

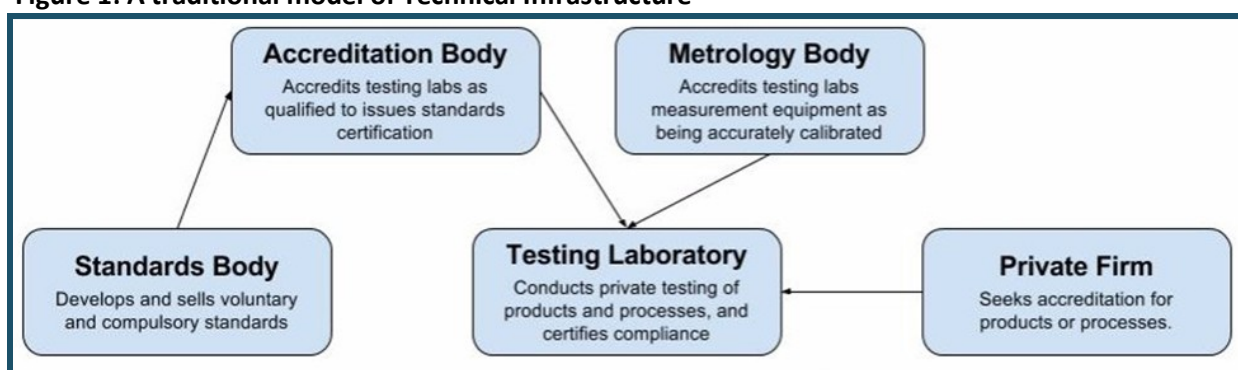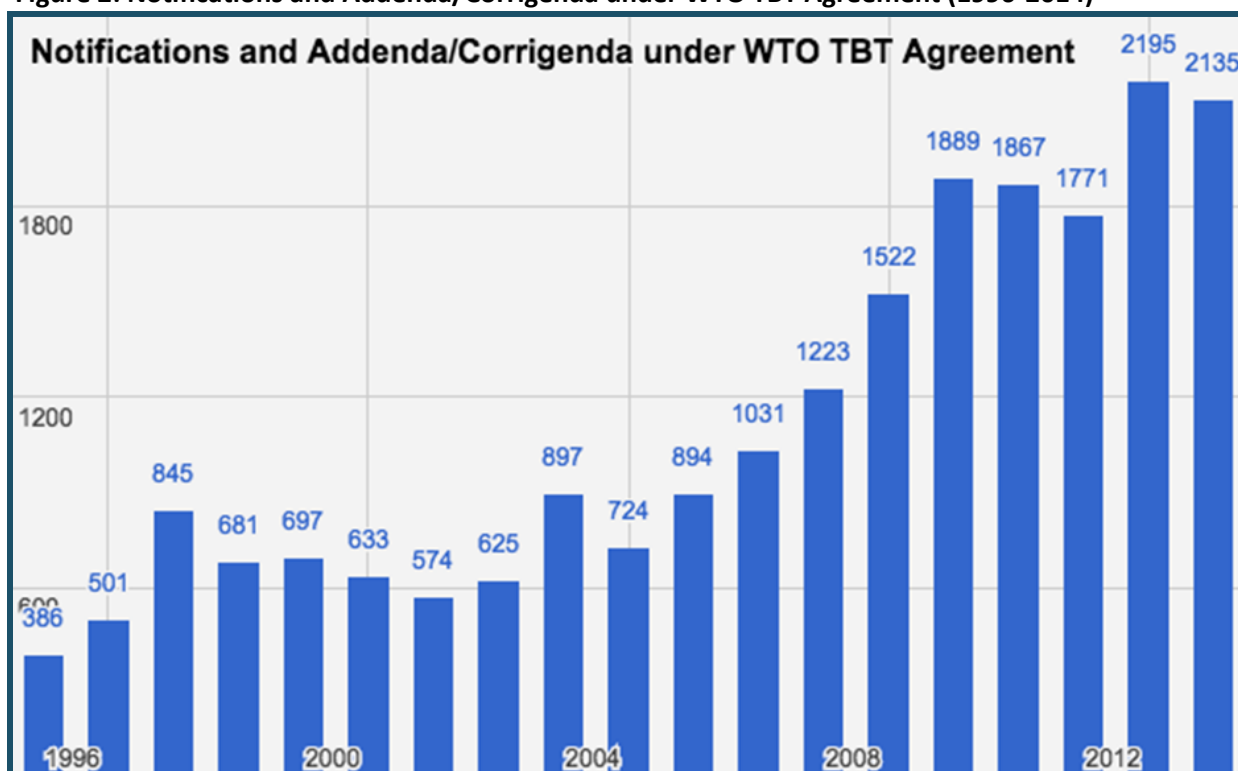**Figure 1: A traditional model of Technical Infrastructure**

Figure 2: Notifications and Addenda/Corrigenda under WTO TBT Agreement (1996-2014)

Source: Author calculations based on World Trade Organisation, Technical Barriers to Trade Information Management System. http://tbtims.wto.org.

Much of this rapid global expansion in technical regulations is attributable to growth of global value chains. Standards are essential for value chains: as production processes are fragmented among firms and countries, lead firms increasingly rely on standards to monitor the quality of their highly dispersed production processes. Non-compliance with standards can block firms from participating in major value chains, and can undermine regional efforts to create productive hubs that facilitate mutually beneficial access to these value chains.

Technical barriers to trade tend to be relatively low in Southern Africa, registering as less important than barriers like inefficient customs procedures or transport infrastructure.[2] This is driven by two key factors. First, the products that tend to be traded in the region are generally basic goods, and unlikely to attract the type of standards more common in value-added products. Second, national technical infrastructure in the region is still relatively underdeveloped, with bodies either having few standards or standards that are based on shared international standards.
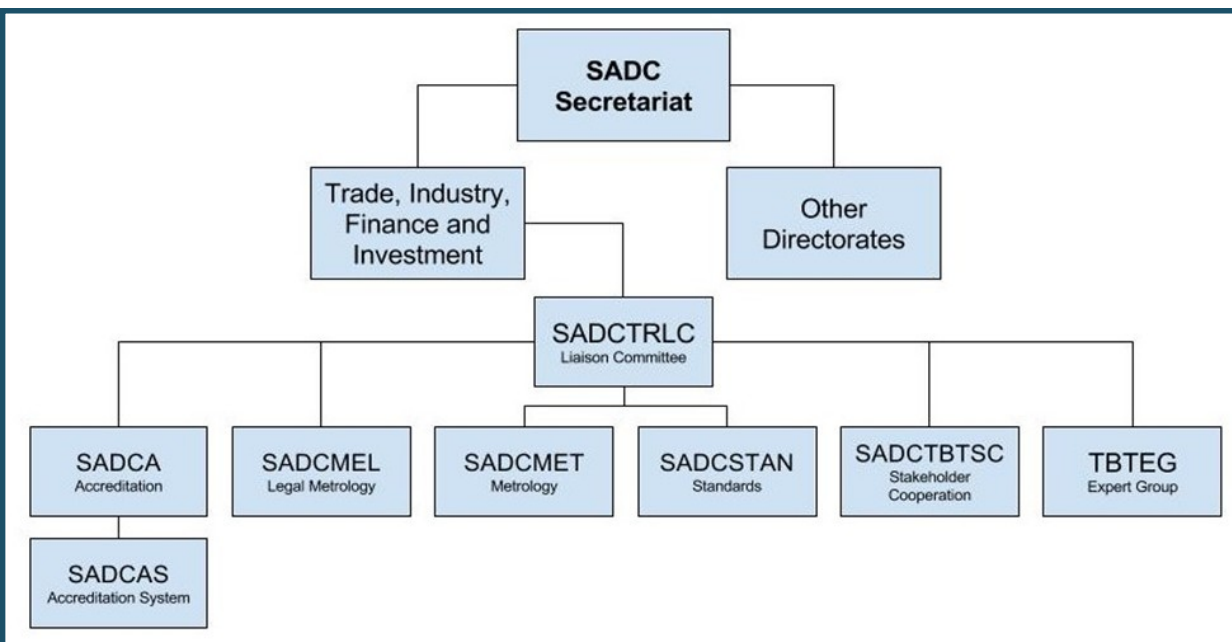
This can, however, change rapidly. Standards bodies across the region are expanding capacity and developing new standards at a rate that outstrips the development of the accreditation and laboratory infrastructure that firms need to comply with these standards.

Firm capacity to meet standards remains low, with many lacking the basic monitoring systems to measure their compliance. The type of regional integration that most policy interventions are hoping to build – of trade in value-added goods and the creation of regional value chains – will require an expansion of capacity and capability to develop and enforce technical regulations.

Efforts to harmonise and cooperate in the field of technical regulation are therefore essential for laying the groundwork for the type of regional integration that Southern Africa needs. SADC has extensive regional cooperation bodies (see Figure 3), most created under the TBT annex to the Protocol on Trade. Most of these bodies are purely meeting places for the regional national SQAM bodies and have little independent institutional capacity, often relying on donor funding for simple functions such as holding meetings. The core bodies for the three prime technical functions – standards, accreditation, and metrology – aim at harmonisation and cooperation to improve regional structures but are similarly hindered by tight capacity constraints, competing national interests, and overlapping responsibilities with other cooperation efforts at the African Union or at international levels.

[2]Author's calculations based on Tripartite Free Trade Agreement Non-Tariff Barriers Reporting Mechanism, http://www.tradebarriers.org/

Figure 3: SADC cooperation bodies

Source: SADC. 2008. *Technical Barriers to Trade (TBT) Annex to the SADC Protocol on* Trade. Approved by the SADC Committee of Ministers of Trade on 12 July 2008, Lusaka, Zambia.

Technical regulations are therefore increasingly important for efforts to trade globally, enter value chains, and develop high-quality regional integration in Southern Africa. The lack of capacity in SADC technical infrastructure risks letting the region fall behind the changing global environment for technical regulation, and yet substantively expanding this capacity is unlikely, given the many pressing development concerns facing cash-strapped Southern African states. Equipping regional technical infrastructure for this changing environment will require doing more with very little.

CROSS-CUTTING INTERVENTIONS: MONITORING TOOLS

Technical infrastructure needs to respond quickly and effectively to problem areas, and to concentrate scarce resources on the most pressing challenges. Not all technical regulations are technical barriers to trade – basic standards like the design of a plug point are unlikely to block trade. The key to responsive policymaking is therefore the capacity to distinguish between good technical regulation and technical barriers to trade.

This is a difficult task for the SADC. An overwhelming number of technical regulations, each complex on their own, and weak institutional capacity makes it hard for the region to identify problem areas and take the steps to address them. The capacity-complexity mismatch can only be overcome with effective monitoring tools, which are currently missing or underdeveloped in the region. The monitoring tools that do exist – like the World Trade Organisation TBT committee reporting requirements – are only good at identifying when new regulations arise, and are bad at differentiating between good and bad regulations. Other non-tariff barrier (NTB) tools – such as the Tripartite NTB reporting mechanism – are equally inadequate, because they are primarily used by logistic firms, which are more likely to report on customs or infrastructure issues than technical rules. Given these restraints, SADC should consider developing new monitoring mechanisms that better equip it to respond to problem areas.

Perhaps the best option would be the creation of a system of collecting and storing import rejection data. This data would register when a regional member state turns imports away at the border for a failure to comply with compulsory specifications. The database would capture details of the product, the reason it was turned away, and the respective exporting firm and country – and would empower regional technical personnel to monitor emerging problem. If a run of products are turned away for similar reasons, policymakers could either approach the importing country and request engagement on the regulation, or they could provide direct upgrading assistance to local firms to enable them to meet the required standards. Similar databases are maintained by the United States, European Union and Japan – and could be developed relatively simply in SADC through information sharing by customs agencies.

The import rejections database is unique among the various monitoring options in that it directly identifies problem areas. Rather than simply showing what technical regulations are out there, it focuses on which rules are blocking imports – and provides the level of detail needed for policymakers to take action. It does, however, have limitations. Import rejections do not highlight rules that discourage exporters from trying to export in the first place. They also fail to highlight barriers from standards that, while not legally required, might be demanded by lead firms. To address the latter issue, supplementary data gathering could be undertaken by requiring a declaration of standards that firms are certified in during the export registration process when applying for export certificates. This could be done at national level, and would allow states to understand which firms have export capacity, but do not have standards certification. These firms could then be targeted for upgrading assistance as a means to unlock new market opportunities.

Both of these interventions require a complex process of cooperation between standards bodies, customs agencies, and departments that govern export procedures. Navigating this bureaucracy will require more financial and political commitment than other possible interventions. They are nevertheless the essential interventions that will empower regional technical infrastructure to actually engage with the technical regulations that most need their attention and avoid more costly scattershot approaches to dealing with technical regulations. Less costly and complex interventions are nevertheless available, most notably a revitalisation of the SADC TBT Stakeholder Committee. The TBTSC is a forum for engagement between regional policymakers and business, but is currently non-functional. Two simple steps could bring it to life: first, establishing

relationships between national and regional business bodies and the committee; and second, providing a small budget to facilitate travel for public and private sector representatives. The ensuing engagement will be useful to tackle major emerging problems before they spill over into acrimonious disputes in the media.

SPECIFIC INTERVENTIONS: STANDARDS, ACCREDITATION, AND METROLOGY

The creation of monitoring capacity will allow regional structures to identify problem areas related to specific products standards, but structural interventions are needed to improve the broader efficiency of the region's technical infrastructure. This needs to come in each of the three core functions: standards, accreditation and metrology. Any number of interventions are possible, but one per function is highlighted in this section.

Standards

Standards cooperation is essential to aligning regional technical regulation, and much can be done to improve harmonisation efforts. However, attention also needs to be given to creating buy-in from firms. Regional firms often don't understand standards, or what benefits are on offer, are unsure of the procedures involved, or lack the internal controls necessary to comply with standards. All of these

barriers could be smoothed by regional efforts to promote ISO 9000 as a leading-standard – one that can have a catalytic effect in promoting greater compliance with technical regulations.
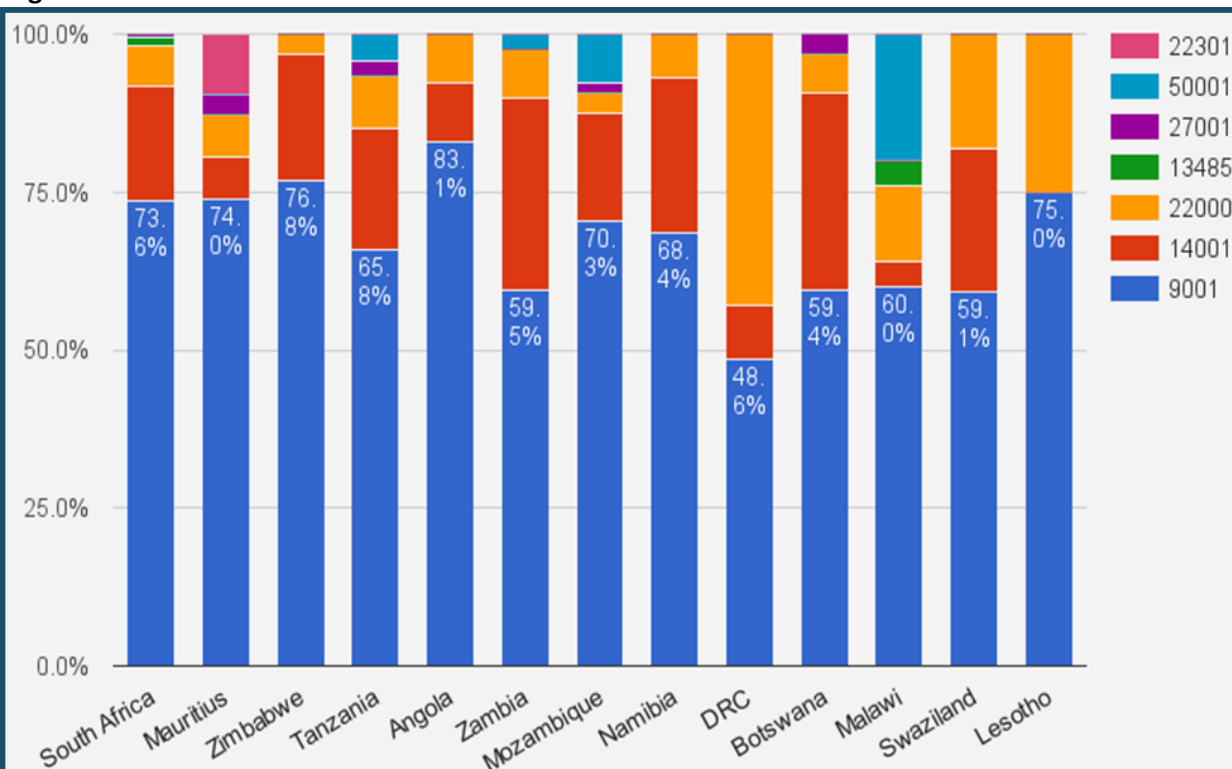
ISO 9000 refers to a family of international quality management standards. They specify a set of core management principles and control systems that should allow firms to manage the quality of their outputs. ISO 9000 is perhaps the best known global standard, and is widely recognised, but beyond the merit of the standard itself, it offers four key benefits as a leading standard.

First, ISO 9000 sets up the controls needed to comply with other standards and regulations. A functional quality control system makes it easier to meet whatever requirements a firm might face, whether complex regulations or private standards, and cuts across multiple sectors and products.

Second, the procedure for obtaining the standard familiarises firms with the process of certification, and helps develop relationships with standards bodies and certifications agencies. With a greater understanding of the certification process and better networks with relevant bodies, the subsequent costs of further certification should decline.

Third, the region is well suited to offer ISO 9000 certification with a strong pre-existing network of assessors and professionals that can guide firms through the process.

Figure 4: ISO utilisation across SADC

This is because ISO 9000 is already the most popular certification among firms in the region. For South Africa (where data is more readily available) ISO 9000 was identified as the most important certification for both exporters and local manufacturers[3] while it was also by far the most popular of all international standards issued in the region, as can be seen in Figure 4 (page 5).

ISO 9000 makes firms more competitive, better able to gain other accreditation, and can be rolled out relatively efficiently and effectively. While there is already widespread demand for ISO 9000, targeted rollout of the standards to small and medium enterprises, which tend to be much less likely to achieve any form of certification, can improve the region's capacity to meet technical regulations.

Accreditation

Of SADC's 15 member states, only South Africa and Mauritius have their own accreditation body, traditionally leaving the region's testing laboratories dependent on the two member states' infrastructure.

This changed in 2007, with the formation of a regional accreditation body, SADC Accreditation Service. SADCAS is a rare achievement in SADC – a truly regional body, empowered with an operational mandate beyond cooperation and engagement. Building an accreditation body from scratch is a daunting task, but SADCAS has done well in its first few years of gaining international recognition and rolling out accreditations to eight countries.

Unfortunately, the future of SADCAS is threatened by a lack of financial sustainability beyond 2017. SADCAS began as a donor-funded project before SADC member state contributions took over in 2013/14. At the time, however, the funding came with the strict condition that SADCAS must be fully financially independent within five years, which is simply not possible.
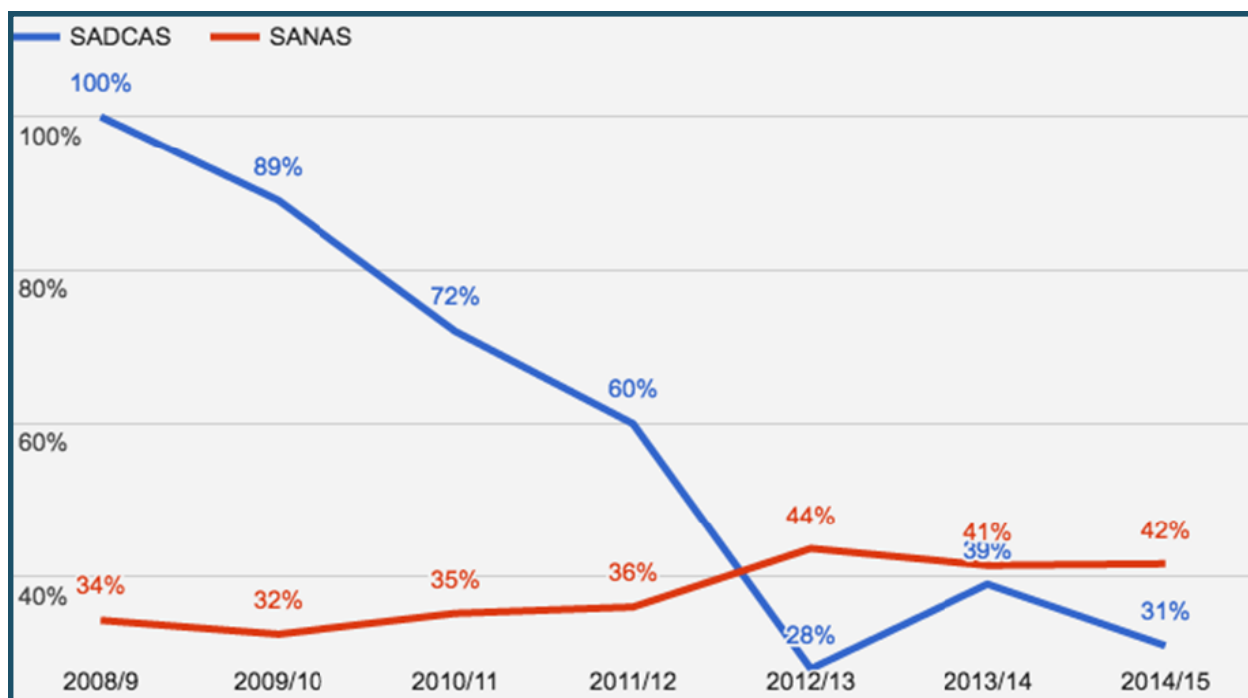
South Africa's accreditation body, the South African National Accreditation Service (SANAS) – which is 36 years old, services vastly more laboratories and which has much better capacity to charge substantial fees – still receives 42%[4] of its budget from the state, a figure that has increased over the last five years[5] (see Figure 5). It would be extremely difficult for a new institution, facing a far less developed regional testing market, to be financially sustainable at this point in its development.

[3]Koch, S. and Pete, M. 2005. *Technical Barriers to Trade faced by South African SMMEs*. Policy Paper No 2.
[4]Author's calculation from SANAS Annual Reports.
[5]SADCAS funding data from SADCAS Annual Reports.

Figure 5: Share of funding from government/donors for SANAS and SADCAS

Source: SADCAS and SANAS Annual Reports.

Technical regulation cannot create jobs, but it is a vital underpinning for the type of policies that drive regional integration and create industrial jobs.

The strict funding limitation on SADCAS means the institution has to choose between either drastically reducing operations, compounding wait times that can already reach up to 18 months, or substantially increasing the fees it charges for accreditation. The likely result is the use of both options, leaving the bulk of the region facing long, expensive accreditation procedures that will undermine the development of the type of testing environment needed to assist firms remain competitive.

If SADCAS were to fail completely, member states would be left with the costly process of developing their own accreditation bodies or returning to overreliance on SANAS. SADCAS's operational budget deficit currently covered by SADC is $1.171 million over the five-year period. The costs involved in losing SADCAS to a lack of funding are far higher.

If anything, SADC member states should be actively discussing how to expand the capacity of the regional accreditation agency, but as a first step, SADC must move quickly to assure the financial sustainability of SADCAS.

Metrology

Metrology is a classic example of the challenges facing technical infrastructure. It is a field that few understand, and that fewer can justify as a central economic function. Cash-strapped developing countries will have a hard time investing large sums in highly technical equipment that monitors measurement accuracy, rather than in any number of pressing social and developmental challenges. And yet technical regulation cannot function without a reliable measurement backbone. It is the core that underpins all testing and that connects specifications to the real world. While metrology must be developed in the region, it will need to be done in a way that maximises the scarce resources that are structurally going to be limited in so technical an area.

One key way to do this is to leverage the capacity imbalances in the region. South Africa's metrology capacity is vastly ahead of the rest of the region, and is currently being upgraded. NMISA's history and expanding capacity mean there is a supply of old metrology equipment in South Africa that remains functional even if it is slightly outdated.

This old South African equipment should be used in the region through sharing systems, in particular the creation of a Metrology Instrument Bank. Such a bank has been mooted in SADCMET (SADC Cooperation in Measurement Traceability) meetings, and would be a simple way of using what the region already has more efficiently.

CONCLUSION

Technical regulation cannot create jobs, but it is a vital underpinning for the type of policies that drive regional integration and create industrial jobs. As it stands, Southern Africa's technical regulation is developing too fast, with too few controls to ensure that it is directed towards developmental purposes. Capacity expansion that simply results in ever more standards being churned out increases complexity, but not quality. Practical interventions that create supporting mechanisms -– such as monitoring systems, or assistance for firms seeking accreditation – are essential to creating a development-focused regional technical infrastructure.