



The history, impact and political economy of barriers to food trade in sub-Saharan Africa: an analytical review

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Key messages

- Despite an overall perception of liberalised food markets, governments in sub-Saharan Africa continue to intervene heavily, particularly in times of rising food prices. This was particularly pronounced during the recent food crisis, and has moreover manifested itself in the general proliferation of non-tariff measures.
- Both trade and agricultural policy are becoming regionalised but there is significant variation in terms of the pace of integration and harmonisation across the continent, as well as the extent to which non-state actors are incorporated into these processes.
- Formal barriers at the borders are not necessarily the most important impediment to trade in food staples in sub-Saharan Africa. Particularly better infrastructure and trade related services can facilitate the spatial integration of product and factor markets in both the agricultural and non-agricultural sectors.
- Understanding the political economy of agricultural trade policy helps explain some of the dynamics contributing to the persistence of barriers. This includes the non-implementation of regional agreements, a lack of credible commitment between the government and private sector actors, the disproportionately strong role of anti-reform lobby groups and the difficulties of farmers to engage in collective action, among others.
- Policy-makers and donors have an opportunity to engage in a number of ways to make trade agreements more effective and credible, address information asymmetries and issues of trust within markets and improve data collection and dissemination efforts.

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Executive Summary

While agricultural tariffs in sub-Saharan Africa have come down substantially in the past two decades, the persistence of trade barriers presents a substantial obstacle to increasing intra-regional trade in food staples, manifesting itself both in a significant ‘border effect (i.e. the additional trade costs created by the presence of a border), as well as in large price differentials between consumption and production zones.

This issue is particularly relevant in the arid and semi-arid drylands regions of the Sahel and Horn of Africa where frequent food shortages and increasing scarcity and vulnerability could be mitigated through the facilitation of food trade and a more predictable, coherent trade policy environment.

This analytical review aims to inform a forthcoming report by the *World Bank* analysing current and projected future drivers of vulnerability in these drylands regions, so as to increase resilience and identify promising interventions. Its purpose is *to review the existing literature and ongoing research on barriers affecting food staples trade in sub-Saharan Africa*, covering both general policies that affect food and inputs trade, as well as commodity-specific policies targeting particular foods, food groups, or inputs.

It assesses the available evidence for sub-Saharan Africa in regards to three overarching research questions:

- 1) *What are the main policy measures and barriers impacting on the trade of food staples?*
- 2) *What is their impact on food security, prices, welfare, product diversity and trade volumes?*
- 3) *What is the political economy that contributes to these barriers and keeps them in place and what is the history of past (successful and unsuccessful) efforts to reform these barriers?*

The review focuses on both national policies as well as policy-making at the regional level. It is desk-based, relying on available literature, and has been complemented by targeted interviews.

Agricultural trade policies and barriers to agricultural trade

In addressing the first question, Section 2 reviews both national and regional analyses of the scope of tariff and non-tariff barriers impacting on the trade in food staples and inputs in different regions. Generally speaking, the wave of reforms aiming to put an end to two decades of highly interventionist policies has only led

to limited improvements in the development of food staple value chains. Thus, despite an overall perception of liberalised food markets, governments continue to intervene heavily, particularly in times of rising food prices, leading to “tremendous unpredictability and frequent change of direction in governments’ role in the market” (Jayne and Tschirley 2010, p. 3). The discretionary use of policies in sub-Saharan Africa was particularly pronounced during the 2007-09 spikes in global food prices and subsequent food supply crises.

Beyond measures brought on directly by food price increases, the past years have seen a general proliferation of non-tariff measures in Africa. These barriers apply to large as well as small traders: the World Food Programme, which is the largest purchaser of food in West Africa, has reported frequent problems obtaining export permits, quality certificates and other documents from different countries in order to process transactions.

Concurrently, within Africa’s numerous Regional Economic Communities (RECs) there has been momentum towards greater liberalisation and integration. This has followed a paradigm of linear integration, with governments aiming to sequentially integrate goods, labour and capital markets, and eventually monetary and fiscal policies. Intra-regional tariffs have been lowered substantially and tend to be far below applied MFN tariffs.

Throughout the continent, agricultural trade policy have been regionalised, and as tariffs have come down, regional economic communities have also increasingly been aiming to incorporate non-tariff issues into the regional policy framework. Every REC has its own policy on standards (which are largely based on the text of the WTO SPS agreement,) and while there is some move towards greater harmonisation, or at least mutual recognition, these efforts tend to differ in scope and effectiveness.

While economic integration and tariff reduction has always been core to their agenda of RECs, some have in recent years begun to prioritise food security and agriculture as a central area of regional policy, particularly following the initiation of the continent-wide Comprehensive Africa Agriculture Development Programme through the African Union. However, efforts to address the almost chronic levels of food insecurity in many parts of Africa, and particularly in the Sahel and Horn regions, have been much slower to get off the ground .

Parallel to these processes, some regional non-governmental institutions have begun to engage in these processes (particularly through donor support). However few NGOs or research organisations are actively involved in the policy-making process, though this varies across regions. Recent work on agricultural policy-making in the SADC region and EAC all point to limited consultation with and participation of non-state actors. In general policy-making often remains driven by REC headquarters, donor agencies and national governments with outside actors exerting little influence on these policy processes.

Impact of barriers to trade on trade flows, prices, food security and welfare

Section 3 surveys existing economic analyses examining the impact of barriers on the development of food staples value chains, as well as the impact of policies and barriers to trade on food security, prices, welfare, product diversity and trade volumes.

In terms of evidence of within-border barriers to trade, the paper provides an overview of a variety of studies using different spatial analysis and 'Law of One Price' methodologies to indirectly measure trade barriers. These tend to show that formal barriers at the borders - the between dimension of trade barriers - are not necessarily the most important impediment to trade in food staples in sub-Saharan Africa. The within-border component is far from being negligible through its direct impact on transaction costs and its indirect impact on farmers' decision to participate in the market as well as on their adoption of productivity-increasing inputs and agricultural technologies.

In terms of the role of infrastructure and trade-related services, hard infrastructure – roads, energy and communication infrastructure – facilitates the spatial integration of product and factor markets in both the agricultural and non-agricultural sectors. By lowering the transactions costs of market exchange, they can boost net returns to agricultural production. Better market connections increase the availability of inputs (improved seeds, fertilisers and pesticides) and agricultural extension services, all of which are likely to increase agricultural productivity and, consequently, welfare.

There is also a growing literature on the issue of systemic inefficiencies in rural infrastructure arising from key types of intermediate logistic infrastructure, in particular transport, extension services, storage and standards-related services. Looking more specifically at transport services, various studies suggest that the 'physical' cost of transporting goods in Africa is not as disproportionately high as expected, but rather that it is the lack of competition in transport services that increases the cost of transporting goods. Various studies highlight the importance of tackling the governance and political economy of freight logistics in order to increase the supply of and competition in transport services.

In much of the theoretical literature, examining the relationship between trade and food security, agricultural trade is considered a tool that allows domestic price and supply stabilisation in the event of food crises. Since the international food price spikes and food shortages in 2008/09, a wealth of literature has tried to understand the drivers of food price volatility in Africa and the impact of various strategies and policies on price stabilisation and food security. A series of studies highlight that the adoption of pro-cyclical trade policies, such as the reduction in import protection or increases in export barriers have been among the underlying causes of the recent food crises, and are most likely to have amplified both price spikes and volatility. More recent work provides new evidence that higher price volatility in international markets did not increase food price volatility in the African countries, therefore ruling out the "imported" component of food price volatility.

There is generally little conclusive evidence on the impact of particular trade policies on food security. Further, the assessment of the impact of agricultural trade distortion requires taking into consideration both the direct effects on producers and consumers, but also the indirect and potentially longer-term effect on factor returns, in particular on agricultural wages.

Looking at the effect on the organisation of the value chain, setting export and import bans, import tariffs and cumbersome customs procedures in Africa does not in fact impede trade, but rather increases the formal trade transaction costs, and in turn, increases incentives for the value chain's stakeholders to reorganise in the informal sector

When governments insulate their domestic food market from fluctuations in international prices, there is evidence that this amplifies international food price fluctuations and that in turn this form of insulating behaviour has a negative impact on the country's food security. Indeed, various papers argue that such measures become ineffective because of a collective action problem, resulting in a domino effect that pushes world food prices to even higher levels and drives more countries to in turn protect their markets, thereby further perpetuating high food prices. Further, while many of these emphasise the importance of informal barriers to trade within and between countries, there has been very little formal analysis of their impact on poverty.

Explaining the persistence of trade barriers

Section 4 provides an overview of some of the main findings and 'stylised facts' of past work on the political economy of agricultural trade policies, and illustrates this using country case study examples of political economy dynamics in specific food staple sectors, and their influence on the formation of tariff policy and non-tariff measures for food trade. It also examines past successful and unsuccessful trade reform efforts, with a particular eye towards understanding the political economy dynamics that are likely to have contributed to the outcome.

There are 6 main dynamics to take into account here:

1. *The non-implementation of regional agreements* - The active engagement of RECs and other outside actors in attempting to improve the policy framework for intra-regional trade has only had a limited impact on national policies. In part this is an issue of legitimacy: in crisis situations, policy-making takes place at the national level and is subject to national interests. This is further complicated by the fact that countries are frequently members of multiple RECs. Finally, for many issues that are particularly relevant in drylands regions, there haven't thus far been efforts to create regional protocols.
2. *The credible commitment problem* – Governments are motivated to provide an adequate supply of food staples (particularly in cities) at an affordable price, while traders aim to maximize profits. Neither side knows what the other is going to do and bases its behaviour in part on expectations regarding the likely behaviour of the other, with no third party available to provide guarantees or predictability. .
3. *The role of neo-patrimonial political systems in policy-making* - Within the political structure of most counties, commodity distribution is an important tool for leaders to maintain loyalty and support. This can best be achieved through a provision of benefits for targeted beneficiaries, rather than broad-based developmental efforts. This helps explain the erratic nature of policy-making seen during the food crisis. Further, surviving elections tends to be a central objective for leaders and they are likely to favour constituencies that voted for them. As a result public agricultural expenditure tends to be biased towards either highly visible public goods impacting a large number of people, or towards private goods that can be targeted.
4. *The disproportionately strong role of anti-reform lobbies* – Many trade barriers benefit vested interests that extract rents through these and will

lobby against their removal. This creates a major obstacle to reforming agricultural markets. There are numerous explanations for this. First, likely reform losers have an incentive to follow the fate of their sector or industry and therefore tend to have better information, while potential beneficiaries of reforms are less likely to recognise gains. This is in part due to the fact that many vested interests benefited from liberalisation in the absence of regulation, leading to very lightly regulated private monopolies and oligopolies.

5. *The difficulties of collective action for farmers* - In contrast to elite interest groups, farmers face numerous barriers to collective action. These include spatial dispersion, poverty and low levels of education. Further, if lobbying were to provide benefits, these would be spread thinly across millions of farmers, reducing the incentive of individuals to engage. This is further complicated by the general lack of access to government and other elite institutions. As a result, barriers impacting on the welfare of (particularly smallholder) farmers receive little attention.
6. *The role of information asymmetries, cognitive biases and capacity constraints* – Information asymmetries between traders and policy-makers, as well as insufficient or incorrect data further compounds the difficulty for governments in addressing trade barriers. For example, in many countries there seems to be a lack of awareness of the fact that a large part of cross-border trade is informal and only few countries collect data on informal trade flows. There also tends to be a lack of awareness of the scope and nature of NTBs, with only the EAC so far creating an effective system to report NTBs and monitor follow-up. However, despite decades of training efforts, capacity at the national and local government level remains a problem. Finally, the persistence of barriers and harmful policies can additionally be explained by the mixed success of past reform efforts.

Section 4 also examines past successful and unsuccessful trade reform efforts, with a particular eye towards understanding the political economy dynamics that are likely to have contributed to the outcome, including the following:

- *Economic growth and movement towards a more developmental agricultural trade policy*: As countries grow and develop, the share of income spent on food declines and the economy diversifies. This reduces the perceived onus of governments to ensure low food prices and national self-sufficiency, and can increase a country's focus on improving the international competitiveness of its agricultural crops.
- *Crises as a window of opportunity* - Crises can be a significant driver of reform, allowing for a reorganisation of the institutional apparatus and policy framework governing agricultural policy.
- *Public and interest group pressure* - Civil society and parliamentary pressure as well as increasing access to information on agricultural policies can lead to mobilisation among civil society and agricultural interest groups, as well as the media, for better policy outcomes.
- *Policies that address concerns of reform 'losers'* - Given that every process of reforming agricultural trade policies brings with it groups that will lose under the new regime, ensuring a mechanism for compensation that will mollify those likely to block reforms is of central importance.
- *Provision of better information* - Just as inadequate information helps explain the persistence trade barriers (and especially non-tariff barriers), addressing these information gaps can be integral to their removal. The

COMESA-EAC-SADC online NTB database (www.tradebarriers.org) has been instrumental in drawing policy-makers' attention to the scale of these barriers, with each complaint at minimum discussed in tripartite forums.

Moving forward: recommendations and conclusions

The review include some recommendations and suggestions on ways forward to support different actors in furthering welfare-enhancing trade policy reforms:

Making commitments in RTAs more effective and credible:

- 1) **Creating a clear set of rules for interventions** – To address the ad-hoc nature of agricultural policies, one frequently cited measure is to develop a clear set of guidelines, rules and thresholds when interventions can occur (e.g. clarifying when changes in tariff rates would be instituted or the conditions that would trigger the release of stocks).
- 2) **Fostering a coalition for change** – The impact of some East African business and agricultural lobbies on agricultural trade policy has demonstrated that these can be influential if they are well informed, adequately resourced and seen to represent a large constituency.
- 3) **Recognising the limits of regional organisations** – Agreements entailing lower levels of commitment, where compromises are more likely and mutual compliance can be more effectively monitored, could be beneficial (e.g. focusing on mutual recognition rather than harmonisation for certain issues, such as standards).

Addressing information asymmetries and issues of trust

- 4) **Making barriers visible** - The apparent effectiveness of the tradebarriers.org initiative in enabling ordinary citizens to draw attention to barriers is notable. This may be worth replicating in other regions, such as West Africa.
- 5) **Recognising how trade reforms might impact the distribution of rents** – Assessing the potential impact of reforms dynamically and over time is essential, as is establishing regular consultative mechanisms where key actors can hold each other accountable for delivering on promises.
- 6) **The centrality of compensation mechanisms** – Given the strong incentives of likely losers of reforms to mobilise against efforts to liberalise markets, it is worth considering what kind of measures and mechanisms would weaken resistance. This is likely to be highly context-specific and requires dialogue and bringing together frequently antagonistic stakeholders..

Improving data collection efforts

- 7) **Better and more accessible data** – Despite significant efforts in recent years to improve the collection and quality of data on prices, food production and other key indicators in this area, many countries still face substantial data gaps that limit the ability to devise evidence based trade and agricultural policies, especially in crisis situations.

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- 8) **Understanding the structure of informal trade** – The alternative to informal trade for many traders is not formal trade, but rather not trading at all. Given the scale of informal trade, and the many barriers and costs associated with formal border crossings, particularly in many of Africa’s drylands regions, a better understanding the unique challenges faced by traders in this area is essential.

The above analysis and recommendations on institutional and policy reforms may contribute to supporting resilience in the drylands of Sub-Saharan Africa in the following ways:

Reducing exposure to shocks

- 1) **Reducing barriers on inputs** – Better access to organic and inorganic fertilisers, as well as new, drought-resistant seeds and crops varieties can allow for the adoption more intensive production systems, increased productivity and even the replenishment of degraded lands. Thus, mutual recognition of fertiliser blends and standards and new seeds varieties could increase the transparency of trade in inputs and increase producers’ confidence in the quality of purchased products.
- 2) **Focusing on barriers to investment and technology transfer** - Access to markets through road construction, better transport and storage as well as to extension services is important to support increased productivity and the adoption of new climate-resilient technologies, which can help reduce the occurrence of shocks. It is therefore essential to improve the efficient transfer of information (especially through extension services) and to provide capital and incentives to invest in the new technologies.

Reducing sensitivity to shocks

- 3) **Fostering agricultural trade services** – Discretionary and reactive domestic and trade policies in response to food price spikes have generally not had their intended effect. Thus far, African regional trade agreements have few commitments in this regard. Fostering initiatives of sub-regional coalitions of willing RTA members to fast track implementation of agreements – as has been the case among select EAC member states – could be a first step towards more transparency in policy making, at least among participating countries.
- 4) **Linking the development of cross-border transport corridors with projections of environmental change**- Changing climatic and demographic trends will inevitably affect both the supply and demand for food staples. Trade and agricultural policy-making and investments will likely need to respond to this, particularly in addressing which trade and transport corridors may be needed to connect current and future surplus agricultural production areas with deficit areas.

Improving coping capacity

- 5) **Linking regional food security and social protection efforts to trade** – Regional efforts to develop food security programmes and social safety net measures are only progressing slowly and thus far these have generally not considered in too much detail the potential relevance of trade policies. Further, in many RECs and national governments there is evidence of insufficient

awareness of the types of problems faced in value chains specific to drylands regions.

- 6) **Countering negative impacts of trade liberalisation and facilitation** - It will be important to assess the potential long-term impacts of trade agreements and also of large-scale trade facilitation measures on particularly vulnerable groups, many of whom have adapted to a lack of formality in cross-border trade. A variety of tools, including Poverty and Social Impact Assessments, can be adapted to changes in trade policy in order to assess impacts on different population groups.

The paper concludes with an assessment of gaps in the literature and highlights topics that are both under-researched and for which further analysis has the potential to have high impact. This includes:

The politics of trade barriers: More work focusing on the structural factors inhibiting the effective implementation of regional reforms could help explain how to ensure agreements are in fact meaningful. Further, there would be great value in a better understanding of different types of agricultural advocacy organisations, for example in understanding the role and tactics of some farmers' and private sector organizations in southern and eastern Africa in bringing about changes for national and regional trade and agriculture policies.

Assessing the impact of trade barriers: In terms of improved methods towards assessing the impact of trade barriers, there is considerable scope for more spatial analysis, and in particular taking into consideration crop substitution and complementarity in diets, as well as the impact of infrastructure on the patterns of trade. Furthermore, there is scope for more economic analysis quantifying the impact of the volatility and discretionary use of trade policies on food safety and welfare.

Analysing bottlenecks in food staple value chains: There is still scope for more knowledge about the determinants of price transmission along the value chain, as well as on factors determining its governance and the distribution of value addition that often impacts on the profitability and the incentive to participate in staple food supply chains. More work also appears necessary in order to identify the drivers of demand for staple foods, including urbanisation, the development of breeding, and the food industry, among others.

1 Introduction

While agricultural tariffs have come down substantially in the past two decades, the persistence of trade barriers in sub-Saharan Africa presents a substantial obstacle to increasing intra-regional trade in food staples. This manifests itself both in a substantial ‘border effect (i.e. the additional trade costs created by the presence of a border), as well as large price differentials between consumption and production zones (Haggblade et al. 2012). For example, Brenton, Portugal-Perez and Regolo (2013) have found that the effect on relative prices of crossing the Niger-Nigeria border is equivalent to adding an additional 594 km to the distance to markets. Increasing regional trade in food staples and reducing the costs entailed in bringing food to markets could conceivably help address the chronic levels of food insecurity in many parts of Africa and reduce sensitivity to shocks.

This issue is particularly relevant in the arid and semi-arid drylands regions of the Sahel and Horn of Africa where frequent food shortages and increasing scarcity and vulnerability could be mitigated through the facilitation of food trade and a more predictable, coherent trade policy environment. This analytical review aims to inform a forthcoming report by the *World Bank* analysing current and projected future drivers of vulnerability in the drylands regions of SSA, so as to increase resilience and identify promising interventions. Within this context, better understanding the determinants of trade in food staples, as well as the role of governments in setting agricultural trade policy, has become a central issue in considering medium-term coping strategies.

The purpose of the report is *to review the existing literature and ongoing research on barriers¹ affecting food staples² trade in sub-Saharan Africa³*, covering both

¹ The report will focus on the role of tariffs, non-tariff measures (NTMs) as well as non-tariff barriers (NTBs), defined as non-tariff measures (NTMs) that are not implemented in the “least trade-restrictive” manner as well as all other barriers or disincentives to trade within and between countries such as physical barriers (logistical and infrastructures barriers increasing transaction costs) as well as Institutional barriers (domestic policies and their political economy as well as coordination failure along the value chain, etc.)

NTMs include:

- Technical measures, including sanitary and phyto-sanitary measures (SPS), technical barriers to trade (TBT), among others.
- Non-technical measures, including trade-protective measures, price controls, finance measures, non-automatic licensing, quotas, and subsidies, among others.
- Export-related measures, including export-license restrictions, export subsidies, state-trading enterprises or export monopoly boards with special rights and privileges (see UNCTAD 2012 for a more detailed taxonomy of NTMs).

² The focus will be on the following food staples: maize, rice, sorghum, millet, wheat, cassava, yam, cowpea and livestock as well as on key inputs (most prominently seeds fertiliser, and animal feed, though literature on agricultural research and development was also reviewed). The analysis may draw on certain research carried out on cash crops (e.g. coffee, cotton, cashews, etc). Particular attention is being paid to policies and barriers to the trade of commodities that are particularly important in drylands systems, such as, livestock

general policies that affect food and inputs trade, as well as commodity-specific policies targeting particular foods, food groups, or inputs. Building on previous work carried out by ODI on barriers to food trade in West Africa (see Engel and Jouanjean 2013), it assesses the available evidence for sub-Saharan Africa in regards to three overarching research questions:

1. *What are the main policy measures and barriers impacting on the trade of food staples?*
2. *What is their impact on food security, prices, welfare, product diversity and trade volumes?*
3. *What is the political economy that contributes to these barriers and keeps them in place and what is the history of past (successful and unsuccessful) efforts to reform these barriers?*

The review will focus on both national policies as well as policy-making at the regional level, and will provide a particular focus on commodities and barriers that are particularly relevant for countries in Africa with large arid and semi-arid regions (especially in the Sahel and Horn).

In addressing the first question, Section 2 reviews both national and regional-level analyses of the scope of tariff and particularly non-tariff barriers impacting food staples and inputs in different regions. This includes a survey of the growing number of regional agreements over the past decade, focusing particularly on the tension between current efforts towards liberalisation, regional integration and the harmonisation of policies on the one hand, and, on the other hand, national self-sufficiency and the proliferation of trade bans and other barriers. It will also examine the coherence between agricultural policies, trade policies and broader food security strategies in these different regions.

Section 3 surveys existing economic analyses examining the impact of barriers to the development of food staples value chains, as well as the impact of policies and barriers to trade on food security, prices, welfare, product diversity and trade volumes. It will briefly describe and evaluate the different methodologies used to assess the level of trade integration and the constraints to trade in various regions in sub-Saharan Africa.

Section 4 provides an overview of some of the main findings and ‘stylised facts’ of past work on the political economy of agricultural trade policies, and illustrates this using country case study examples of political economy dynamics in specific food staple sectors, and their influence on the formation of tariff policy and non-tariff measures for food trade. It also examines past successful and unsuccessful trade reform efforts, with a particular eye towards understanding the political economy dynamics that are likely to have contributed to the outcome.

The paper concludes with an assessment of gaps in the literature and will highlight topics that are both under-researched and for which further analysis has the potential to have high impact, in terms of its economic relevance or its ability to catalyse reform. It will also include some recommendations and suggestions on ways forward to support different actors in furthering welfare-enhancing trade

³ The study covers essentially all of sub-Saharan Africa, as almost all countries (with very few exceptions) contain large arid or semi-arid regions, or have active trade flows with such regions. However, given the focus of the report, a particular emphasis will be placed on countries in the Sahel and Horn regions. Where relevant, we will examine policies and barriers according to regional economic community grouping (and especially ECOWAS, EAC, COMESA, SADC, though overlapping membership exists between these).

policy reforms, linking this to the broader framework of the Drylands report and particularly to how specific institutional changes and policy reforms designed to overcome the types of trade barriers described in this paper could contribute to (i) reducing exposure to shocks, (ii) reducing sensitivity to shocks, and (iii) improving coping capacity.

The review is desk-based, relying on available literature, including peer-reviewed articles and volumes, as well as consultancy reports. This has been complemented by eight targeted semi-structured interviews with agriculture and trade experts in order to validate findings from the literature review, to facilitate the identification of gaps in the research, and for the refinement of the overarching recommendations. Given the breadth of coverage, the review of any given aspect of these issues is not comprehensive, but nonetheless aims to provide a representative picture of the scope, impact and political economy of barriers to food staple trade in sub-Saharan Africa.

2 Agricultural trade policies and barriers to agricultural trade in Sub-Saharan Africa

2.1. High levels of intervention in the decades following independence

In the decades following independence, most African countries adopted heavily interventionist policies in agricultural and food commodity value chains. Governments were involved in agricultural marketing and food processing through the creation of marketing boards, para-statal processing units, and government controlled cooperatives. This generally prevailed for basic food crops and in particular coarse grains.⁴ The emphasis was on food self-sufficiency and industrial export growth, with the idea that agriculture would not take the lead in realizing economic growth and development. In particular, the objective of food staple policies was to provide cheap food for urban consumers and industrial workers.

Eastern and Southern African countries were more likely to engage in the production and marketing of staple food crops, while West African countries intervened in the supply chains of export crops and were much less influential in grain markets (Swinnen et al. 2010; Kherallah et al., 2002). However, as governments had a monopolistic position in the basic trade of food crops and an oligopolistic position in input and credit markets, farm gate agricultural prices were very low, resulting in limited production incentives. While governments in sub-Saharan Africa have been very active in supporting inputs and coarse grains markets (the former because of its importance in increasing agricultural productivity and the latter because of its importance in diets), other food staples, often complementary or substitute to coarse grain have been given less attention.⁵

⁴ This was also the case for important export crops such as coffee, cotton, and tea.

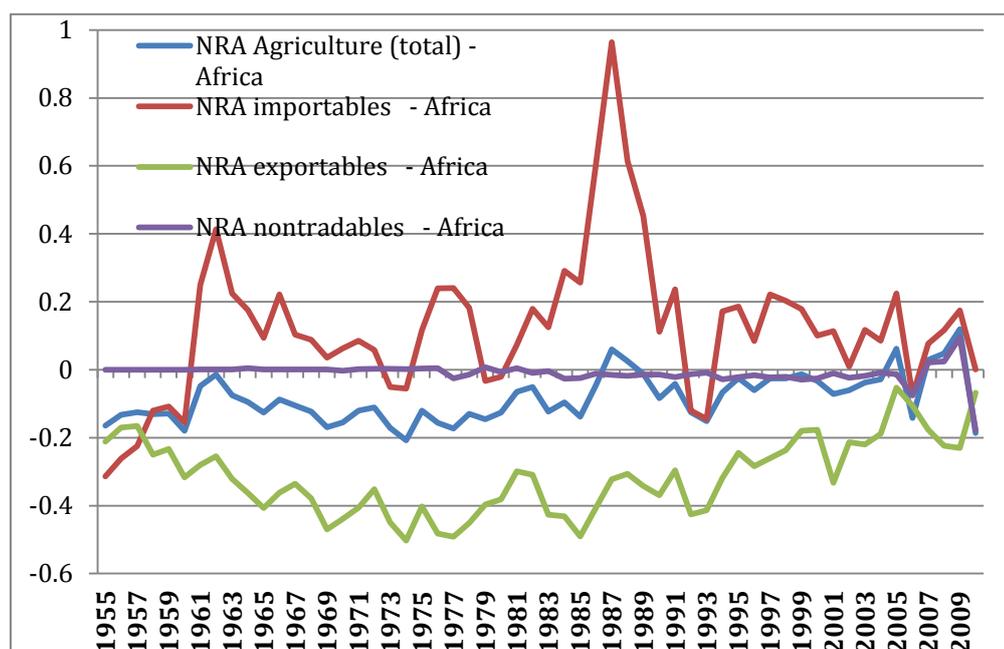
⁵ However, this seems to be changing for cassava in many countries, the nonetheless the second most consumed crop after maize. It is Africa's most drought-tolerant food staple and acts as an important shock absorber. Jirstrom (2013) argues that cassava's role in moderating food shortages in Africa is likely to increase, if global warming and regional climate change leads to more frequent droughts. Cassava can be harvested at the beginning of the rainy season, when few staple crop substitutes are available, make it a crucial food security crop (Meridian Institute, 2012). As its importance increases, as is the likely use of distortions. For example in Zambia the Food Reserve Agency (FRA) bought cassava in addition to maize at a price 20 to 25% over the market price. During the 2006 season, because the FRA offered a price 30% to 50% higher than

2.2. Liberalisation reforms during the 1980s and 1990s

In most cases, interventionist policies in food staples value chains, and in particular in the cereal markets in the 1970s and 1980s increasingly became financially unsustainable. Their reform under structural adjustment policies in the 1980s and 1990s was intended to eliminate costly marketing boards and to reduce the distortions affecting producer prices and incentives in order to improve the efficiency of agricultural markets.

Following several rounds of multilateral liberalisation, regional integration and most significantly, economic reforms in the context of structural adjustment, many countries in Africa have reformed their food staple (and particularly cereal) marketing systems and reduced the scope of state intervention, albeit with varying levels of success (Coulter and Poulton 2001). Nominal rates of assistance (the percentage by which government policies have raised gross returns to farmers above what they would be) have gradually converged between import-competing products, which have tended to receive high levels of assistance, and exportable products, which have generally been sources of tax revenue (see Figure 1).⁶

Figure 1: Nominal rates of assistance for agricultural products



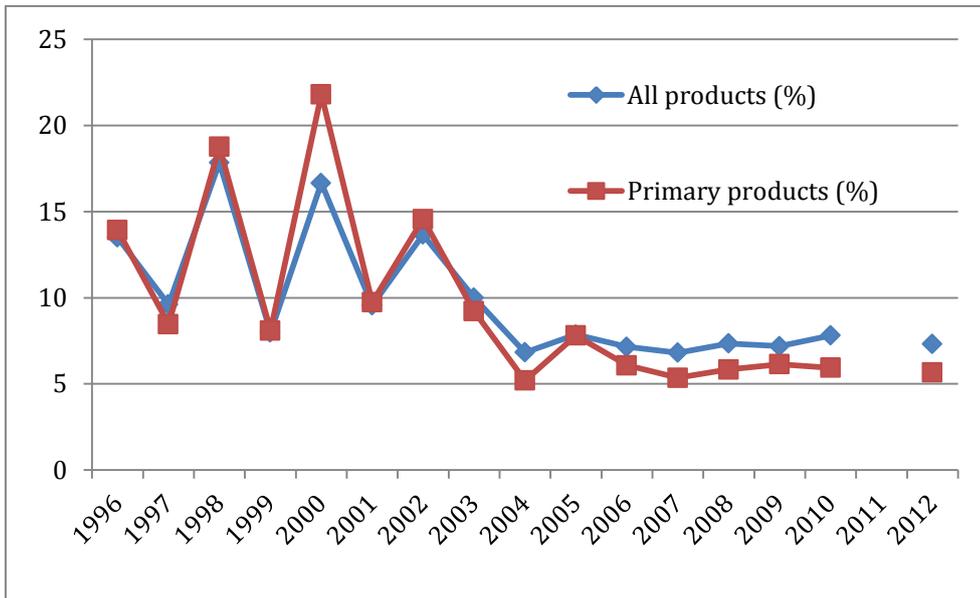
Source: World Bank Agricultural Distortions Database

Similarly, weighted mean tariffs for all primary products (following significant volatility in the late 1990s), have come down in the last 15 years (see Figure 2).

the prevailing market price and as a consequence they were able to procure their entire objective of 2,400 ton in less than two weeks. However, as Haggblade et al. (2008) argue, if such prices are beneficial – at least in the short run – to the farmers, it risks stalling industrial development as the use of cassava-based carbohydrates in the food, feed and starch processing industries relies on its low price.

⁶ This is in contrast to Asia and Latin America, which provide positive or neutral incentives towards its tradable goods (Benin & Binswanger-Mkhize 2011).

Figure 2: Applied weighted mean tariffs for all products and primary products in sub-Saharan Africa



Source: World Development Indicators

Generally speaking, the wave of reforms aiming to put an end to two decades of highly interventionist policies has not led to improvements in the development of the food staple value chain. Thus, despite an overall perception of liberalised food markets, governments continue to intervene heavily, particularly in times of rising food prices, leading to “tremendous unpredictability and frequent change of direction in governments’ role in the market” (Jayne and Tschirley 2010, p. 3). Distortions have occurred primarily through purchasing efforts and price controls by marketing boards, as well as discretionary trade instruments.⁷ These elements have decreased profits and increased risk for private investment (see Coulter and Poulton 2001, Kheraralah 2002).

The discretionary use of policies in sub-Saharan Africa was particularly pronounced during the 2007-09 spikes in global food prices and subsequent crises of food supply (Staatz et al. 2008, Bryan 2013). Temporary export bans were a regular feature of policy-making, and resulted in high levels of price volatility, as trust between farmers and producers, private sector traders and the government broke down (Dorosh et al. 2009). In East Africa, numerous countries instated export bans on maize and other food staple crops. Bryan (2013), in a summary of select country responses to the crisis lists some of the most common trade and non-trade measures used during this time. These include:

- Ethiopia’s decision to ban the export of teff, wheat, maize and sorghum in December 2006), which was later expanded to all cereals in June 2008;
- Kenya’ export ban on all food crops (in October 2008);

⁷ While this will be discussed in greater depth later, there is a reasonably pervasive view in the literature that the problem was less liberalisation as such, but rather an incomplete process liberalisation, accompanied by a fear of policy reversal, control and regulation of prices and poor macro-economic management.

-
- Malawi's decision to ban all maize exports and provide no export licenses in the 2007/08 season;
 - Zambia's ban on exports of maize (January 2008) and wheat (June 2009)

For these four countries, Bryan (2013, p. 6) argues the heavily interventionist measures were “problematic and suffered reduced effectiveness, especially due to informal cross border trade or strategic behaviour by the private sector (e.g. storing grain until the ban is removed).” The countries studied also in many cases reduced import tariffs and increased procurement efforts, raising fertiliser subsidies, and strictly enforcing price ceilings.⁸

In West Africa, governments across the sub-region responded to the crisis by reducing or eliminating rice import tariffs and then by prohibiting cereals exports. For example, Guinea initiated an export ban on all food to neighbouring countries, Burkina Faso controlled and restricted exports of local cereals, and Senegal prohibited rice exports (Rolland and Alpha 2008). However, these efforts were insufficient to protect domestic consumers from the increase in international prices (Aker et al. 2010). While many of these measures have since been removed, several African countries have now reinstated self-sufficiency objectives in their agricultural policy. The futility and often counter-productive impact of these policy responses will be discussed in greater depth in Section 3.2.

2.3. A proliferation of non-tariff measures

Beyond measures brought on directly by food price increases, the past years have seen a general proliferation of non-tariff measures in Africa. In their assessment of the implementation of the ETLs, USAID 2011 (cited in Harris et al. 2011) find NTMs to be a much more significant problem than tariffs.⁹ Keyser (2012) cites a study finding that traders had to pay 40 different fees when travelling from Ghana to Nigeria. These barriers apply to large as well as small traders: the World Food Programme, which is the largest purchaser of food in West Africa, has reported frequent problems obtaining export permits, quality certificates and other documents from different countries in order to process transactions (Keyser 2012).

In the SADC region, NTBs are seen as the most significant constraint on the growth of intra-SADC trade (AECOM 2011). A World Bank (2011) study finds that *notified* NTBs affect products accounting for ca. 20% of regional trade. Between 2000 and 2010, the total number of NTBs in Zambia, Malawi and Mozambique increased from 400 to over 1,400 (Kalaba 2012).¹⁰ This is likely to have disproportionately impacted agricultural trade, as SPS measures saw the largest rise in NTMs. Such measures require only very limited justification and can be applied at the national level (unlike rules of origin, which tend to be agreed regionally – see Figure 3 below). This is also mirrored in Karugia et al. (2011), who quantify the impact of such barriers in the EAC region and find these to make up

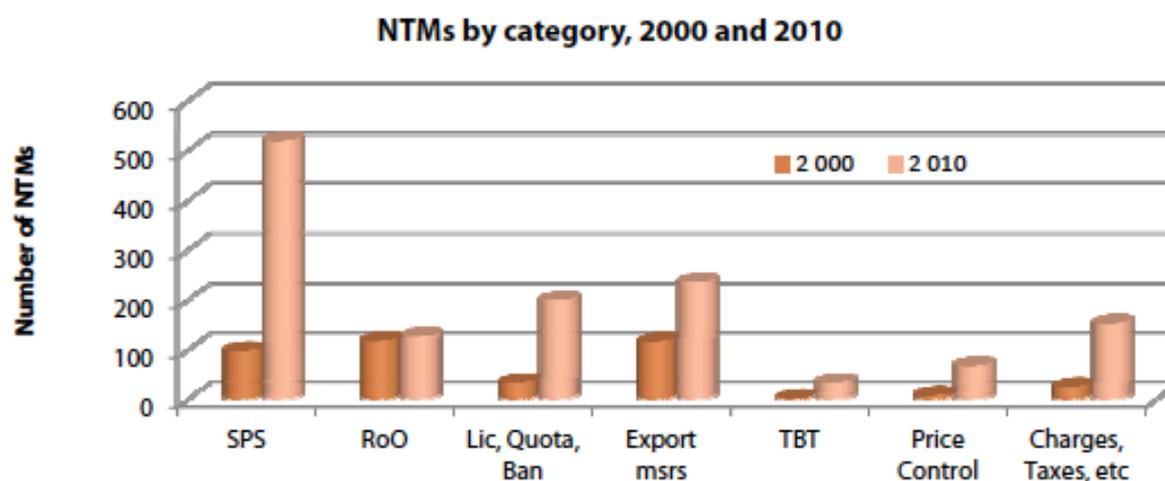
⁸ See also Wiggins et al et al. (2010) for an overview of country responses to rising food prices.

⁹ As summarised in Harris et al et al. (2011, 3-4) these include gaps between regional agreements, national legislation and implementation; limited private sector knowledge of free trade protocols; strong incentives for informal trade; non-compliance with existing tariffs; the widespread imposition of non-tariff barriers (NTBs); the non-functioning of the *Inter-States Road Transit* (ISRT) regime; non-recognition of certificates of origin and non-compliance with truck axle loads; and the challenges of joint membership for members of both ECOWAS and UEMOA.

¹⁰ The authors note that over 50% of NTBs added between 2004 and 2007, in the lead-up to the 2008 tariff reduction.

35% of total maize transfer costs, and that the elimination of NTBs would lead to a social surplus for the maize and beef subsectors in Kenya, Uganda and Tanzania amounting to US\$ 2.3 billion, US\$ 0.8 billion and US\$ 1.8 billion, respectively.¹¹

Figure 3: Comparison of affected agricultural products 2000 and 2010



Source: Kalaba (2012, p. 3)

2.4. Regional efforts to address trade barriers and institutions

The past years have seen a significant move towards greater liberalisation and integration within Africa's numerous Regional Economic Communities (RECs). This has followed a paradigm of linear integration, with governments aiming to sequentially integrate goods, labour and capital markets, and eventually monetary and fiscal policies (Hartzenberg 2011). Intra-regional tariffs have been lowered substantially and tend to be far below applied MFN tariffs.

Numerous RECs have become free trade areas and are moving at different speeds towards adopting customs unions and in some cases even common currencies. The East African Community (EAC) is most advanced in this regard, having launched its common market in 2010. The Community of East African States (COMESA) launched its customs union in 2009. The SADC Trade Protocol, which came into force in 2000, has provided for the gradual elimination of tariff and non-tariff barriers between members states and since 2008 SADC has been a free-trade area with 85% of trade duty-free and plans to become a customs union in 2013. These three RECs decided in 2008 to move towards a tri-partite free trade area comprising all 26 member countries (13 of which had at least dual membership).

In West Africa, UEMOA member states have established a surveillance mechanism for macroeconomic convergence, along with a customs union and the abolition of tariffs or quotas on intraregional trade in domestic products. ECOWAS member states agreed in 2006 to join the existing UEMOA Common External Tariff (CET) and a fifth tariff band (at 35 per cent) was added in 2009 at the behest of Nigeria.

¹¹ The authors use a spatial equilibrium model (SEM) to quantify their impact on trade and the welfare of EAC citizens as a percentage of total transfer costs for maize and beef.

The Economic Community of Central African States (ECCAS) launched its FTA in 2004, but is facing enormous challenges in its practical application (UNECA and AU 2013). In the medium term, these disparate and overlapping processes of integration and liberalisation are intended to lead to a continent-wide free trade area by 2017 (AfDB 2013).

While economic integration and tariff reduction has always been core to their agenda, RECs have in recent years begun to prioritise food security and agriculture as a central area of regional policy, particularly following the initiation of the continent-wide Comprehensive Africa Agriculture Development Programme (CAADP) through the African Union.¹² This process started in West Africa, with UEMOA's adoption of the *Politique Agricole de l'UEMOA* (PAU) in 2002. Three years later, ECOWAS member states ratified the ECOWAS Agricultural Policy (ECOWAP) in 2005, based loosely on the principles and priorities of CAADP with the main objectives of boosting agricultural productivity and exports, attaining food security in member states and promoting sustainable livelihoods for farmers. In 2013 ECOWAS established a Regional Agency for Agriculture and Food (RAAF), with headquarters in Lomé, Togo.¹³

In the EAC the Agricultural and Rural Development Policy (EAC-ARDP) and the *Agriculture and Rural Development Strategy of 2005-2030* (EAC-ARDS) were launched in 2005 to provide a common agriculture policy for the region, while remaining compatible with the CAADP (Afun-Ogidan et al. 2012). Recently the region has developed a compact in relation to the CAADP. In Southern Africa, the 2013 Regional Agricultural Policy (RAP) similarly aims to complement the CAADP objectives. ECCAS is implementing a common agricultural policy and developing a regional programme on food security.

Efforts to address the almost chronic levels of food insecurity in many parts of Africa, and particularly in the Sahel and Horn regions, have been much slower to get off the ground (see UNECA and AU 2013 for an overview). In West Africa, UEMOA's efforts to set up a regional exchange market for sensitive food products are stalled even though the UEMOA members of the *Comité permanent Inter-état de Lutte contre la Sécheresse au Sahel* (CILSS) are largely in agreement over the initiative (Chambers et al. 2012, p. 10). Particularly in the context of recent food crises and famines in the Sahel and Horn region, there have been some efforts at the regional level, such as the EU-led *Alliance Globale pour l'Initiative Résilience – Sahel* (AGIR). This initiative, involving over 30 countries, UEMOA and ECOWAS and numerous international organizations, has set out at a roadmap to develop targeted seasonal safety nets for the poorest, though its implementation is still in early stages. ECOWAS member states adopted a strategic plan for the development

¹² The Comprehensive Africa Agriculture Development Programme (CAADP) was established by the assembly of the African Union (AU) aiming to raise agricultural productivity by at least 6% per year and increasing public investment in agriculture to 10% of national budgets per year. It provides a common framework for stimulating and guiding national, regional and continental initiatives on enhanced agriculture productivity and food security which each region and country can develop and implement as preferred (van Seters et al. 2012).

¹³ This was announced in conjunction with three new programmes: the Regional Market Regulation Support Programme in West Africa (RMRSPWA) seeks to promote the establishment of food sovereignty through free flow and regulation of intra-regional market for agri-food products; the Regional Social Safety Net Support Programme is aimed at reducing the vulnerability of the region to food and nutrition insecurity. It also seeks to promote sustainable access to food in the ECOWAS region, and the Regional Support Programme for Intensification of Agricultural and Pastoral Development in West Africa aims to promote strategic food products to ensure food security and sovereignty. See <http://reliefweb.int/report/mali/ecowas-launches-regional-agency-agriculture-and-food-security>

of the livestock sector, which is of particular relevance for the food-insecure drylands areas in the region.

In East Africa, COMESA's main specialized agency in this area (particularly in relation to drylands regions) is the Alliance for Commodity Trade and the SADC Regional Indicative Strategic Development Plan, which focuses on food security. The EAC is further developing a community-wide food security action plan, for which it is currently attempting to mobilise resources.¹⁴ In terms of other REC activities in the area of food security, UNECA and AU (2013) point to the IGAD regional disaster risk management programme and its initiation of a regional disaster fund and development of a map of the main hazards that cause disasters in the IGAD region.

In recent years, almost all areas of agricultural trade policy have been regionalised, and as tariffs have come down, regional economic communities have also increasingly been aiming to incorporate non-tariff issues into the regional policy framework. ECOWAS has national committees in place to deal with problems raised by NTBs and has set up complaint desks at the borders (UNECA and AU 2013). EAC, COMESA and SADC have created an online monitoring system where anyone can report NTBs.¹⁵ There have been some efforts to increase harmonization of policies within and even across RECs, for example through the COMESA/SADC Fertilizer Joint Procurement Strategy.

Setting standards is an important tool for this in order to increase transparency along the value chain and reduce transaction costs and information asymmetries, as well as the related risks. Every REC has its own policy on standards (which are largely based on the text of the WTO SPS agreement,) and while there is some move towards greater harmonisation, or at least mutual recognition, these tend to differ in scope (Magalbaes 2010). However, it appears that in recent years RECs in Eastern and Southern Africa have begun harmonising their SPS rules (Keyser 2013). Similarly, region-wide policies on inputs are now widespread. In the case of seeds, some RECs are opting for harmonisation (COMESA) and others for mutual recognition (SADC). However, standards for food staples are much more difficult to address, in particular because the vast majority of producers and intermediaries are of very small scale.

There does not seem to be a very extensive regulation of export taxation within Africa's regional economic communities. While agricultural export restrictions are often regulated in RTAs, with over 66 of the 93 agreements studied by Korinek and Bartos (2012) including explicit disciplines on export taxes, this does not include any of the intra-African RTAs. On quantitative restrictions, very few RTAs present more stringent regulations than the WTO and some major agreements do not impose disciplines or omit mention of export restrictions entirely. Among the five intra-African RTAs, including ECOWAS, the COMESA, SADC, SACU, and the EAC, the authors find that COMESA and ECOWAS do not have any provisions on quantitative export restrictions. The COMESA agreement makes reference to exchanging information on existing export restrictions and duties to support transparency and coordination in the implementation of export restrictions. However, there is no evidence of any effective commitment on the matter. The SACU agreement goes further and officially provides flexibility as it grants the Council of Ministers of SACU the authority to "restrict or prohibit exportation on the basis of economic, social, cultural, or other reasons," but proceeds to state that

¹⁴ See <http://allafrica.com/stories/201304230942.html>

¹⁵ Though concerns remain particularly as to the prioritization of NTBs, clarification for exceptions to the elimination of such measures and the of national level mechanisms to address the elimination of NTBs systematically (Southern Africa Trade Hub 2011).

any domestic law prohibiting or restricting exports takes precedence over the SACU agreement.

Parallel to these processes, some regional non-governmental institutions have begun to engage in these processes (particularly through donor support), however in general few NGOs or research organisation are actively involved in the policy-making process, though this varies across regions. In the EAC region, particularly the USAID-supported Regional Agricultural Trade Expansion Support Program (RATES) has been influential in increasing the role of non-state actors. For example the Eastern African Grain Council (EAGC), including actors representing most stakeholders along the grain value chain, has been a significant actor in the promotion of intraregional trade in grain, enjoying a high degree of acceptance by regional governments due to its broad network (Pannhausen 2010). Similarly, the East African Business Council (EABC) takes an active role in supporting issues of economic integration, while the East African Farmers' Federation has aimed to promote regional integration (particularly through the removal of NTBs) and promote the implementation of the CAADP.¹⁶ In West Africa, a number of non-governmental and advocacy organisations engage on agricultural trade policy, including the Réseau des Organisations Paysannes et des Producteurs Agricoles de L'Afrique de l'Ouest (ROPPA), Réseau des Chambres d'Agriculture de l'Afrique de l'Ouest (RECAO) and Réseau des Opérateurs Economiques du Secteur agroalimentaire de l'Afrique de l'Ouest (ROESAO) and Afrique Verte International (Pannhausen and Untied 2010).

Little information exists on the role, membership or effectiveness of many of these organisation, and recent work on agricultural policy making in the SADC region (Rampa et al. 2012) and EAC (Afun-Ogidan et al. 2012) all point to limited consultation with and participation of non-state actors. In the ECOWAS region there has of late been an effort to combat the lack of private sector awareness of regional protocols (see Harris et al. 2011) by inviting non-state actors to participate more actively in regional fora on the implementation of ECOWAP.¹⁷ However, in general policy-making often remains driven by REC headquarters, donor agencies and national governments with outside actors exerting little influence on these policy processes.

¹⁶ Other key actors listed by Pannhausen (2010) include the African Cotton and Textiles Industries Federation (ACTIF), the Eastern and Southern Africa Dairy Association (ESADA) and the Eastern Africa Fine Coffees Association (EAFCA).

¹⁷ See <http://www.ecdpm-talkingpoints.org/west-africa-on-the-move-to-accelerate-the-implementation-of-its-regional-agricultural-policy-ecowap/>

3 Impact of barriers to trade on trade flows, prices, food security and welfare

3.1. The importance of behind-the-border barriers

Within-border barriers to trade

Spatial analysis (Dorosh et al. 2009, Haggblade et al., 2008, Haggblade, 2013, Haggblade et al. 2012) and 'Law of one price' (LOP) (Aker et al. 2010; Brenton et al., 2013; Versailles, 2012) methodologies allow for an indirect measurement of barriers to trade. They provide not only evidence of forgone arbitrage as a consequence of borders but also put forward the importance of within country informal barriers to trade. They show that formal barriers at the borders - the between dimension of trade barriers - are not necessarily the most important impediment to trade in food staples in sub-Saharan Africa. In particular, Brenton et al. (2013) test the strong heterogeneity of within-country market integration and its important dimension in the appraisal of barriers to trade according to the LOP methodology (Gorodnichenko and Tesar, 2009). They find that in the region, Sudan and Djibouti appear as the most integrated, while Somalia, Burundi and the DRC are the least integrated. All other things being equal, they show that relative prices between towns within DRC and Somalia are estimated to be 49.6 % and 43% above the average relative prices between towns in Djibouti. By doing so, they provide evidence that increasing regional trade integration in food staples in Central and Eastern Africa requires not only a removal of constraints at the borders but also requires action to reduce the constraints to movement of goods within countries. In particular, they highlight the issue of the provision of transport and logistics services.

The within-border component is far from being negligible through its direct impact on transaction costs and its indirect impact on farmers' decision to participate in the market, as well as on their adoption of productivity-increasing inputs and agricultural technologies. Key et al. (2000) differentiate between the effect of fixed and variable transaction costs. Fixed transaction costs are the costs of searching and screening for the best business partner, and of negotiating and implementing a contract, and its follow-up and execution. The agent bears these costs in order to reduce the risk of transaction failure. Such costs are particularly high in situations of asymmetric information. Better access to roads, if it provides access to markets,

reduces information asymmetry about input quality and prices, as well as output prices. Such costs are not directly related to the volume traded and therefore represent a larger constraint for small producers. Broadly speaking, the literature looking at farmers' decisions to participate in the market finds that differences in transaction costs and differential access to assets and services to mitigate these costs are possible factors underlying heterogeneous market participation among smallholders. Variable transaction costs, which the provision of roads should reduce, represent the per-unit cost of transferring the product to or from the market.

A wide range of authors (Winters, 2002; Kilima et al. 2008; Cadot et al., 2010) have emphasized the ambiguous effect of market-liberalising reforms. While reform could directly foster competition and spatial market integration, it could also indirectly restrain competition and integration. The private sector might not be able to develop because of various market failures or simply because the change in relative prices are too small to cover entry costs and to make agricultural services such as trucking and other logistic services profitable. Without sufficient market competition and integration, price signals will not be transmitted efficiently, agricultural producers will fail to specialise according to long-term comparative advantage, and trade gains will not be efficiently realised and distributed.

Infrastructure and trade related services

Hard infrastructure – roads, energy and communication infrastructure – facilitate the spatial integration of product and factor markets in both the agricultural and non-agricultural sectors. By lowering the transactions costs of market exchange they can boost net returns to agricultural production. Better market connections increase the availability of inputs (improved seeds, fertilisers and pesticides) and agricultural extension services, all of which are likely to increase agricultural productivity and, consequently, welfare (see Jouanjean 2013 for a recent review of the literature). Bouët et al. (2008) show that poor transport and communication infrastructure accounts for most of Africa's low levels of intra-regional trade. In an analysis of regional agricultural transport and trade policy, USAID (2011) assesses the transport costs of cereals in West Africa and provides evidence of steep price gradients along trade corridors in the Economic Community of West African States (ECOWAS), indicating the weak linkages between key surplus and deficit markets in the region. Along key trading corridors between Burkina Faso, Ghana and Benin, the transport and logistics costs of moving maize and livestock account respectively for approximately 59% and 18% of the final market prices. Of these, transport costs – i.e. fees paid to transport-service operators and losses in transit – were found to weigh most heavily on the end-market price along the corridors studied. According to Pannhausen (2010) analysing regional agricultural trade in East Africa, transport costs in the region are important not only trans-nationally but also within individual countries. For instance, transport cost accounts for up to 80% of the value of mangoes coming from Mombasa and sold in Nairobi. These recent analyses use new econometric methodologies and new indicators to confirm the importance of improving infrastructure as a major step to trade integration.

There is also increasing interest in the issue of systemic inefficiencies in rural infrastructure arising from key types of intermediate logistic infrastructure in particular transport, extension services, storage and standards-related services. (USAID, 2011; Raballand et al., 2008; Jouanjean, 2013). Because of the various constraints to investment by the private sector and in particular by intermediaries in the food staple value chain, there is a dearth of investment in logistics infrastructure in sub-Saharan Africa.

Looking more specifically at transport services, various studies suggest that the ‘physical’ cost of transporting goods in Africa is not as disproportionately high as expected, but rather that it is the lack of competition in the transport services that increases the cost of transporting goods (Moser et al. 2005, Raballand and Macchi 2008, Raballand et al. 2010, USAID 2011 and Porto et al. 2011). Various studies (e.g. Cadot et al., 2010; Hettige, 2006; Teravaninthorn and Raballand 2009) highlight the importance of tackling the governance and political economy of freight logistics in order to reduce transaction costs. Monopoly and cartels in transport services as well as irregular payments at roadblocks artificially inflate transport costs (USAID 2011 and World Bank 2012 provide examples of this for West Africa and Madagascar, respectively). The lack of competition in transport results not only in high costs but also in poor services (Porto et al., 2011). Therefore, better quality of services and post-harvest management are potentially important sources of increased productivity.¹⁸

The issue of competition in transport services is particularly relevant for food staples value chains, many of which have low value-to-weight ratios (Meridian Institute, 2009). Therefore, as Raballand et al. (2010) argue, a low level of agricultural production means low competition among freighters, as a minimum amount of output is needed to cover their fixed costs, which in low production areas it can already be difficult for a single trucker.

3.2. Lack of transparency and predictability of national agricultural trade policies and its impact on food price volatility

In much of the theoretical literature examining the relationship between trade and food security, agricultural trade is considered a tool that allows domestic price and supply stabilisation in the event of food crises. Since the international food price spikes and food shortages in 2008/09, a wealth of literature has tried to understand the drivers of food price volatility in Africa and the impact of various strategies and policies on price stabilisation and food security.

A series of studies (Anderson et al., 2013; Headey, 2010; Karapinar and Haberli, 2010; Mitra and Josling, 2009) highlight that the adoption of pro-cyclical trade policies such as the reduction in import protection or increases in export barriers have been among the underlying causes of the recent food crises, and are most likely to have amplified both price spikes and volatility. Other analyses try to better understand the drivers of price transmission and price volatility in Africa. Galtier (2013) discriminates among three main causes of food price volatility:

- *“natural” instability stemming from harvest concentration in time and sensitivity to natural hazards such as rainfall, disease and attacks by pests;*
- *“imported” instability due to international price instability being passed on through imports and exports;*
- *–“endogenous” instability due to the dysfunction of domestic markets.*

Conclusions about the reality of “imported” instability vary in particular according to which food products are being analysed, and in particular whether studies look at

¹⁸ In the Ugandan dairy sector, for example, post-harvest loss rates are up to 27% and cause severe economic damage to the households: 6% is wasted at the farm level, while 11% and 10% of production is lost either to spillage or spoilage during transport or marketing, respectively (Pannhausen 2010).

traded or non-traded food products. According to some studies (Staatz et al. 2008, Neven and Demont 2010) the 2008/2009 crises and subsequent general increase in food price volatility provided evidence that international price spikes could be transferred to African markets. On the contrary, a recent IFPRI study (Minot, 2013) provides new evidence about the small scale of transmission of international food prices volatility to food staples market in Africa. Minot concludes that higher price volatility in international market did not increase food price volatility in the African countries he examined, therefore ruling out the “imported” component of food price volatility. Nonetheless, he emphasises that food price volatility in Africa remains quite high, and is much higher than in other regions of the world with an average volatility of grain prices in the African countries examined of about twice the volatility of international grain prices.¹⁹

In general, with international prices more stable than African prices, the results of Minot’s study suggest that African food prices are more stable for processed and highly tradable foods (cooking oil, bread, wheat, and rice for which imports represent a large percentage of supply) than for less traded foods for which African countries are more or less self-sufficient (cowpeas, maize, beans, sorghum and millet). Further, he finds that African food prices are more stable in the largest (usually capital) cities than in secondary cities, and that food price volatility is higher for maize in countries such as Kenya, Malawi, Zambia, and Zimbabwe that are most active in terms of intervening to stabilize maize prices. Minot suggests two reasons for this: either that intervention policies are responses to intrinsically higher maize price volatility or that government efforts to stabilize prices introduce uncertainties discouraging private traders from engaging in the market and therefore appear counterproductive. The latter is supported by various case studies: *“These findings are consistent with a number of studies that suggest that unpredictable government intervention in maize markets, and the trade restrictions that often accompany these policies, can inhibit private traders from participating in trade and storage activities, thereby increasing seasonal volatility and exacerbating price spikes associated with supply shortfalls”* (Minot 2013, p 21).

Minot (2013) concludes that international trade can play a useful role in stabilizing food prices and that food self-sufficiency is not a promising strategy for reducing food price volatility. He therefore casts doubt on the effectiveness of traditional food price stabilization programs. Domestic factors may contribute more to African price volatility than do international price fluctuations. In particular, he highlights that policies should focus on the level of food prices in the region rather than on their volatility. Accordingly, the author concludes that price stabilization policies and in particular price stabilization trade policies could in fact be counterproductive.

3.3. Evidence about the impact of trade policies on food security and welfare

There is generally little conclusive evidence on the impact of particular trade policies on food security. In a systematic review on the impact of liberalisation reforms, McCorriston et al. (2013) highlights that a key explanation for the mixed results of these reforms on food security and welfare is the role of price transmission, in other words how prices adjust following trade reform and, in turn

¹⁹ As measured by the standard deviation of the monthly proportional change in price

what impact these price changes have on different consumer and producer groups.²⁰ Policies that reduce prices favour consumers, providing them with cheaper access to food. The impact on producers depends on whether they participate in the market and if they are net sellers or net buyers. However, if net buyers can benefit from the expenditure side, rural households are also likely to be harmed on the earning side as occasional food sellers, but also more indirectly as sellers of unskilled on-farm labour.

The assessment of the impact of agricultural trade distortion requires taking into consideration both the direct effects on producers and consumers, but also the indirect and potentially longer term effect on factor returns, in particular on agricultural wages (Rutten et al. 2011; Anderson, 2013). Policies affecting agricultural prices are likely to have an indirect effect on the demand and wages of on-farm labour. Therefore, such trade policies appear inefficient as they affect all food consumers and/or producers in the country and not only the target groups. Anderson et al. (2013) suggest that, domestic policy instruments, such as conditional cash transfers that could provide social protection for the poor work far more efficiently and equitably than variations in border restrictions.

Looking at the effect on the organisation of the value chain, setting export and import bans, import tariffs and cumbersome customs procedures in Africa does not in fact impede trade, but rather increases the formal trade transaction costs, and in turn, increases incentives for the value chain's stakeholders to reorganise in the informal sector. Therefore, as long as there is a profit to be made, trade continues largely unabated due to the porousness of borders, informal trade occurs at a higher cost because small loads are being handled, this requires extra handling in transferring grain from trucks to bicycles and individuals' backs, and other additional transactions costs (Haggblade et al. 2008). This is at the expense of farmers in the export regions, who will receive a lower price for their products and consumers in the importing markets, who are likely to pay a higher price. However, people living at or near the border, and in particular women, are likely to benefit through additional job creation through higher volumes of informal cross-border traffic (UN Women 2011; USAID, 2012).

When governments insulate their domestic food market from fluctuations in international prices, there is evidence that this amplifies international food price fluctuations (Anderson and Nelgen, 2012) and that in turn this form of insulating behaviour has a negative impact on their national food security. Indeed, various papers (Anderson and Nelgen 2011, Martin and Anderson 2012, Rutten et al. 2011) argue that such measures become ineffective because of a collective action problem, resulting in a domino effect that pushes world food prices to even higher levels and drives more countries to in turn protect their markets, thereby further perpetuating high food prices (Rutten et al. 2013). The collective effect reduces the impact of each country's initial coping strategy on its domestic prices. Such a vicious circle is therefore likely to make the world less food secure. Anderson et al. (2013) analyse the poverty impact of this volatility of trade restrictions in reaction to price spikes. They show that the results on domestic price volatility have been very heterogeneous between countries. Moreover, they show that the impact on

²⁰ For example, using a CGE model examining the impact of the end of export duties and exchange rate liberalisation on total quantity of food requirement and food utilization in Nigeria, Abdullateef and Ijaiya (2010) find that liberalisation did not impact the development of the agriculture sector. Instead, these major policy efforts had the tendency to further reinforce food insecurity while not addressing the fundamental problem of food production. Along a similar vein, Wodon and Zaman (2010) argue that from a distributional perspective, the benefits from reduced import tariffs on food staples in Africa are likely to accrue largely to the non-poor.

poverty reduction is unclear and that the net effect might have been to increase rather than to decrease global poverty.

While a wealth of literature focuses on the impact of trade measures on prices level and volatility, the analysis of the extent of the impact of these trade restrictions on the aggregate effect on welfare and food security has been largely overlooked. Anderson and Brückner (2012) look at the extent to which price and trade policies during the period 1960-2005 discouraged production of agricultural relative to non-agricultural tradable goods. They find a statistically significant and sizable negative effect of relative agricultural price distortions on the GDP per capita growth rate of Sub-Saharan African countries and conclude that an anti-agricultural policy bias contributed significantly to sub-Saharan Africa's disappointing growth performance.

Magrini et al. (2013) is one of the first studies aiming to measure if and how the level of food insecurity - captured by indicators of food availability - responds to changes in the intensity of agricultural trade distortions, as well as to provide estimates of the marginal effects of agricultural trade distortions on food security during the recent price spikes. Using a generalised propensity score matching methodology to control for country specific heterogeneities and selection bias, their analysis shows that countries more prone to adopt trade distortion policies tend to perform worse in terms of food availability.

More analyses try to assess the impact of formal trade barriers in food staples on food security and wealth. If many of these emphasise the importance of informal barriers to trade within and between countries, there has been very little formal analysis of their impact on poverty. The only analysis to date investigating the poverty impacts of informal export barriers is Porto (2005) looking at Moldova. His analysis provides evidence that informal barriers to trade distort the efficient allocation of resources, lower wages and agricultural income, and increase poverty. Although this paper does not address the issue of trade in sub-Saharan Africa, the importance of its conclusions suggests that similar analysis could be applied in sub-Saharan Africa.

4 Explaining the persistence of trade barriers

4.1 The political economy that contributes to the persistence of trade barriers

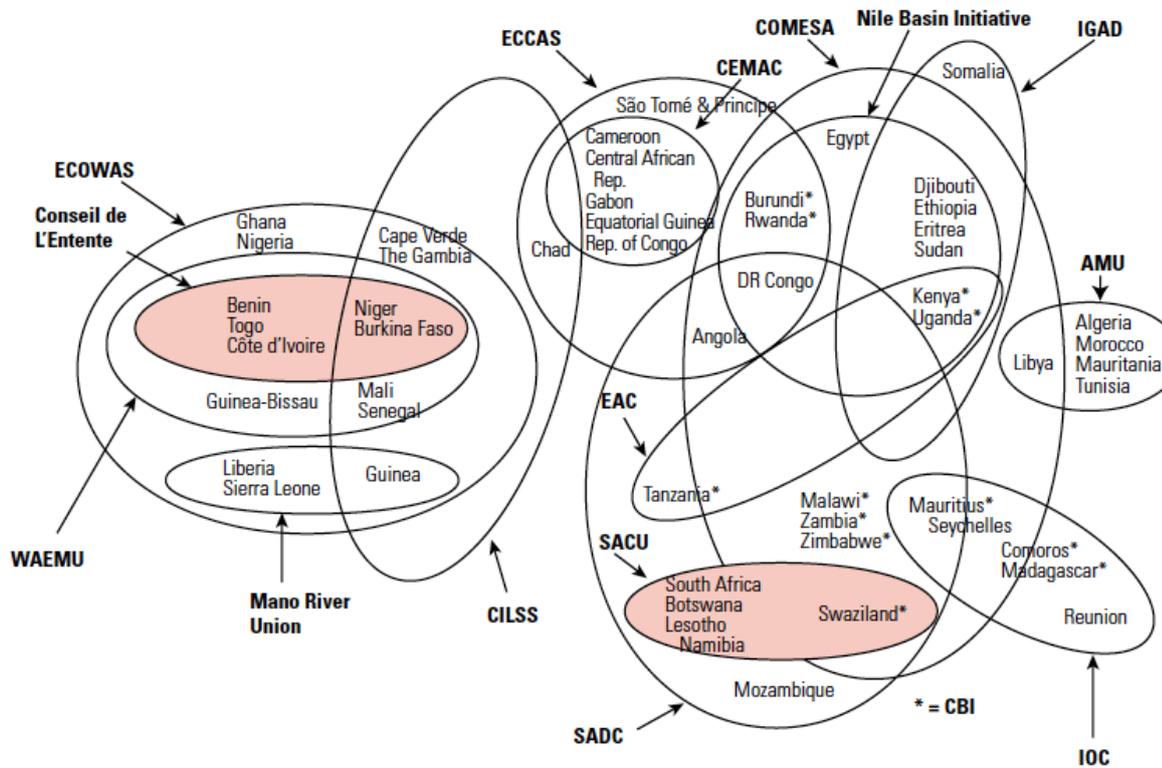
The non-implementation of regional agreements

As discussed earlier, the active engagement of RECs and other outside actors in attempting to improve the policy framework for intra-regional trade has only had a limited impact on national policies, with a substantial gulf separating legislation and implementation (see Harris et al. 2011 on ECOWAS). In part this is an issue of legitimacy: in crisis situations, policy-making takes place at the national level and is subject to national interests. In his synthesis of the political economy of the 2007-09 food crisis in 14 countries (including 7 African countries), Badu (2013) finds that foreign actors had no practical influence in most governments' decision-making processes. As such, the principal (the REC) is unable to control the decisions of the agent (national governments). Furthermore, individual governments are aware of the constraints faced by other member states and therefore are unlikely to act collectively to implement regionally agreed protocols.

This is further complicated by the fact that countries are frequently members of multiple RECs, with one country belonging to four different RECs and only 12 of 52 African countries belonging to just one organisation (see Figure 4). In addition to the frequently conflicting regulatory requirements of integration, this greatly increases the workload for already overstretched ministries, and there are only few examples of countries leaving an organisation (as Rwanda did in 2007 when it left ECCAS to better focus on its membership in the EAC and COMESA). The tripartite COMESA-EAC-SADC agreement and the eventual pan-African free trade area may help rationalise this system somewhat though this is still in the distance. Khadiagala (2011) argues these overlapping memberships “that defy economic logic” are primarily the result of political, rather than economic considerations: for heads of state they present a continuation of a historical legacy in which participation in summits and in foreign affairs helped enhance their image and stature.²¹

²¹ A particularly stark example of this is in Central Africa, where numerous organisations compete for representation. Most members of ECCAS are also members of CEMAC and CEPGL which all are at different levels of integration. This was further complicated by the establishment of the Community of Sahel-Saharan States (CEN-SAD) in Tripoli, Libya.

Figure 4: The ‘Spaghetti Bowl’ of African Regional Trade Agreements



Source: Broadman (2007)

Further, regionally agreed policy frameworks tend to often be incongruous with national policies. In the case of West Africa, Bromley et al. (2011, p. x) argue, regional agricultural trade policy in Western Africa is often just ‘a patchwork of rules implemented unevenly and enforced inconsistently, leading to an opaque business environment that severely limits the economic growth potential that agriculture possesses and significantly affects competitive access to food.’ Further, at the regional level there is an increasing risk of contradictory and overlapping arrangements. One of the most common themes in the ETLIS gap analysis has been the challenge of dual membership for countries belonging to both ECOWAS and UEMOA. Finally, for many issues that are particularly relevant in drylands regions, there thus far haven’t been efforts to create regional protocols (for example on disease control and prevention as well as multiple taxation when crossing borders for livestock). This is exacerbated by insufficient resourcing: many governments lack specific budgets for activities and programmes on regional integration and for many it is “an ad hoc activity and they will only allocate resources when a request is made or political pressure applied” (AfDB 2013).

Thus, explaining the emergence and persistence of economically inefficient trade barriers requires understanding of the national political economy that drives both the formulation and implementation (and non-implementation) of agricultural trade policy. This entails identifying structural factors including historical legacies, power relations (such as rent regimes) and formal and informal institutions, as well

Khadiagala (2011) argues that “the only real common ground that the member countries appear to share is the patronage of Libya that has contributed substantially to projects in member countries.”

as understanding actors' decision logics, including the power structures and incentives that determine their behaviour and engender or inhibit collective action or principal-agent problems (Booth 2013). Aiming to understand agricultural policy processes through such a framework, Anderson et al. (2013, p. 11) argue, allows us to identify “the causal mechanisms behind the variations in policy interventions over time and across sectors, individual commodities, and alternative policy instruments” and “draw implications for agricultural policy reform.”

The role of the credible commitment problem and governments' urban bias

Central to analysis of the political economy of agricultural policy is the ‘credible commitment problem’ (Jayne and Tschirley 2010). Governments are motivated to provide an adequate supply of food staples (particularly in cities) at an affordable price while traders aim to maximize profits. Neither side knows what the other is going to do and bases its behaviour in part on expectations regarding the likely behaviour of the other, with no third party available to provide guarantees or predictability. This escalates in the case of food crises, when the government feels it must take an active role to somehow lower prices and guarantee a stable food supply, and helps explain the frequently erratic policy climate leading to under-investment by the private sector, rule-breaking (as manifested in the form of NTBs) and uncompetitive markets (World Bank 2012).

In many countries food staples have a strategic function: ensuring a steady and cheap supply of white maize in many parts of Eastern and Southern Africa, Jayne and Tschirley (2010, p. 5) argue, is central to the social contract. Frequent distortions through marketing boards towards the aim of keeping prices below a certain level are seen as essential by policy-makers in order to win elections. As such, policy tends to favour urban consumers over rural producers (Bates 1981, Timmer et al. 1983). Consumers are often concentrated in cities, where political action, coordination and enforcement costs are more favourable than in the rural areas where farmers reside (Anderson et al. 2013). As a result agricultural policy is characterised by an anti-trade bias, in which agriculture (and particularly export crops) are taxed highly while import-competing sectors are taxed less but also generally receive little support.

Two examples help illustrate this dynamic: The inadequacy of grain storage options in rural areas in Southern and Eastern Africa can be in part explained by a lack of credible commitment. Intra-seasonal storage is undermined through ad hoc policy interventions such as export bans, sudden modifications or removal of import tariff rates, and stock releases from government silos at concessionary prices (see MSU 2010). Paired with private sector concerns over manipulation of national crop production estimates and food balance sheets this exposes the private sector to huge risks for financial losses and leads to a reluctance to invest. Looking at the issue of storage in grains, Coulter and Poulton (2001) highlight that in many countries the private sector has been slow in taking over government's role. They attribute this failure to uncertainty regarding public policies on storage, making speculative storage hazardous; uncertainty about the total amount of public food stocks as well as food aid; weak systems of crop forecasting; uncertainty about private stockholding; a weak financial sector; farmer's reluctance to store crops because of liquidity constraints and fear of storage losses from insect, rodent or moulds.

In the case of Zambia unpredictable and intermittently interventionist government policies – government procurement, direct import and subsidized sales – have tended to undercut private traders by raising risk and forcing many to exit the formal import market. Chapoto (2012, p. 11) writes of Zambia, that “the private

sector seems to be always uncertain about government actions especially when it comes to imports ... because the government has in the past sanctioned the [Food Reserve Agency] to release its stocks at subsidized prices to only a few selected millers thereby, hurting traders and/or millers who would have imported maize.” In turn the government has accused private traders of acting as “saboteurs who only cared about their interests and profits whilst poor people suffered,” and “traders accused the government of favoring the interests of a few stakeholders.” As a result of this impasse prices have remained high, while surplus maize has been exported illegally in contravention of export bans, given the state’s inability to police all borders.

The role of neo-patrimonialism in policy-making

Within the neo-patrimonial structure of most counties, commodity distribution is an important tool for leaders to maintain loyalty and patronage (see van de Walle 2001) – this can best be achieved through a provision of benefits for targeted beneficiaries, rather than broad-based developmental efforts. This helps explain the erratic types of policy behaviour seen during the food crisis. Watson (2013) sees policy-makers as having been motivated by efforts to reduce food insecurity and increase national food self-sufficiency. However, national governments often did not consider the impact of their policies on other countries.

The impact of these general biases is conditioned in part by the political system in the respective country. For example, in electoral democracies the factors that tend to make collective action more difficult for farmers (their geographic dispersion) renders them potentially politically powerful in elections (Anderson et al. 2013, Bates and Block 2010). A recent study by Bates and Block (2013) found that the introduction of electoral competition is related to an increase in agricultural productivity of 0.5 to 1 per cent, suggesting that this incentivises policy-makers to promote farmer interests. This is even greater in settings with larger rural majorities.

However, a potentially strong electoral voice still does not necessarily translate into lobbying power, particularly if production is dispersed among a large number of producers, and if voting patterns fall according to ethnic lines.²² This provides a useful explanation for Hoffman’s (2013) analysis of the persistent absence of foreign investment or reform in Sierra Leone’s rice sector. Within the two party system most rural voters support the party they are ethnically aligned with while swing voters are based in Freetown. This has required governments to keep the rice price low through short-term measures (reducing import duties or pressuring the private sector to keep prices low), but does not incentivise long-term reforms to improve productivity. Beyond party attachment, rural rice farmers (over 60% of the population) face enormous barriers to collective action. Finally, the origin of the president also matters: Bates and Block (2010) have found that the bias towards taxing cash crops is diminished if the president comes from a region dependent on these crops.

Further, surviving elections tends to be a central objective for leaders, they are likely to favor constituencies that voted for them. This also helps explain why patterns of public agricultural expenditure tend to be biased towards either highly

²² The nature of the democratic system also tends to matter, though this is not specific to Africa: Olper and Raimondi (2009) have found that within democracies, agriculture tends to be more protected under systems of proportional rule rather than majoritarianism, as individual MPs from agricultural regions presumably feel a stronger responsibility to lobby for protection.

visible public goods impacting a large number of people (such as highways or schools) or private goods that can be targeted (such as input subsidies), rather than less visible public goods (such as rural feeder roads, research or extension services) with more broad-based, long-term benefits for the poor (Lopez 2003). Extended reform processes (such as liberalising agricultural markets) come with clear short-term losses and diffuse long-term gains that require reallocating labour and capital to areas of comparative advantage in order to be successful. As a result, programmes such as fertiliser subsidies can become systems of clientelism and – in the case of Zambia - the “price support provided by the FRA and fertilizer subsidies under Farmer Input Support Programme (FISP), have become the major instruments of government policy” (Chapoto 2012). However, this is not always effective: Mason et al.’s (2013) study on the allocation of subsidised fertiliser found that while the Zambian government allocated substantially more subsidised fertilizer to households in constituencies won by the ruling party in the last election (in relationship to the margin of its victory), past subsidised fertilizer allocations was not a significant determinant of the share of votes won by the incumbent president. Rather, voters were more likely to reward reductions in unemployment, poverty, and income inequality.

The disproportionately strong role of anti-reform lobbies

Trade barriers tend to benefit vested interests that extract rents through these and will lobby against their removal. This creates a major obstacle to reforming agricultural markets. There are numerous explanations for this. Firstly, likely reform losers have an incentive to follow the fate of their sector or industry and therefore tend to have better information, while potential beneficiaries of reforms are less likely to recognise gains (Rodrik 1996). Hellmand (1998), in explaining the many incomplete reform processes in sub-Saharan Africa, argues that this is in part due to the fact that many key interests benefited from liberalisation in the absence of regulation, leading to lightly regulated private monopolies and oligopolies. Along a similar vein, Coulter and Poutlon (2011, p. 215) argue that “most [African] countries have been unable to reach a consensus on liberalisation that would ensure consistent implementation of reforms.” As a result, the lack of commitment to further liberalisation, fear of disturbing existing clientelist relationships, and concerns over losing important sources of public revenue resulted in the frequent reversal of reform (Kherallah 2002, p. 2). This is particularly true in the freighting and logistics industry, which has weak incentives for investment and which presents a particularly fertile ground for rent-seeking (Teravaninthorn and Raballand 2008). In their analysis of transport prices and costs throughout Africa, Teravaninthorn and Raballand see the presence of cartels as central to high transport costs, but argue that “*deregulating the trucking industry in West and Central Africa is less a technical than a political and social issue. The main concern is that under a liberalized, competitive market, the demand could be served efficiently by a much smaller number of trucks*” (2008, p. 8)²³ This explains numerous inefficiencies in the sector, ranging from the absence of direct contracting between shipper and transporter, freight overloading and a generally dysfunctional freight allocation system.

During the food crisis, numerous studies (synthesised in Watson 2013) point to the impact of small lobby groups in determining policy. In the case of Zambia, Chapoto

²³ Zerelli and Coo (2010), in a more detailed study of freight transport along 11 corridors in West Africa largely endorse the general tenor of T&R’s findings, though they see distortions as not quite as substantial as T&R and they furthermore find significant variation in the scale of distortion.

(2012) finds, that “the executive branch did not openly veto any policies but in most parts the aspirations of the political party in power and recommendations of lobby groups with access to the cabinet were prioritized.” However, policies based on these recommendations tended to ignore technical input from the relevant ministry, taking into account the input of very powerful interest groups. Thus, barriers persist because there are clear and powerful beneficiaries under the status quo arrangement.

The difficulties of collective action for farmers

In contrast to elite interest groups, farmers face numerous barriers to collective action. These are summarised by Binswanger and Deininger (1997, cited in Hoffman 2013) and include spatial dispersion, poverty and low levels of education. Further, if lobbying were to provide benefits, these would be spread thinly across millions of farmers. This is further complicated by the general lack of access to government and other elite institutions. As a result, barriers impacting on the welfare of (particularly smallholder) farmers receive little attention. Urban dwellers, Birner and Resnick (2011, p. 288), “have the advantage of spatial concentration and can exercise political pressure in the form of demonstrations and revolts without major organizational requirements.”

As such, any effort to reform agricultural markets and remove barriers to trade requires more than just government commitment, but also requires a consensus among key actors involved in the process. In their analysis of efforts to reform markets for nine cash crops in East Africa, Aksoy and Onal (2011) argue this can generally be attributed to the significant redistribution from elites to farmers, which led the former to try to reverse the reforms and destroy the new arrangements. Similar dynamics also apply in the trucking and freighting industry. However, interest groups are not all-powerful and generally need some form of popular legitimacy in order to block reforms. In a comparative study examining efforts to open up the poultry sector in Cameroon, Senegal and Ghana following liberalization of the sector in the late 1990s and early 2000s, Johnson (2011) finds that producers in all three countries tried to mobilize against reforms. However, they were only successful in reversing reforms in Senegal and Cameroon. This is attributed to the ability of the lobbies to mobilize public opinion. Thus, Johnson argues, the ability of interest groups to influence government policy “*is contingent on them building alliances with urban consumers,*” providing continued support for Robert Bates’ work on public choice and the urban bias of policy-making discussed earlier.

The role of information asymmetries, cognitive biases and capacity constraints

Information asymmetries between traders and policy-makers, as well as insufficient or incorrect data further compounds the difficulty for governments in addressing trade barriers. This manifests itself in numerous ways. For one, in many countries there seems to be a lack of awareness of the fact that a large part of cross-border trade is informal. Only few countries collect data on informal trade flows and view facilitating trade for informal traders as a priority (see Africa and Ajumbo 2012 for an overview).²⁴ Moreover, some authors have argued that policy-makers particularly lack understanding of pastoral production systems and do not recognise the economic importance of informal cross-border trade, especially for these

²⁴ One country that has done aimed to track informal trade flows more closely, Uganda, found a thriving informal market in Ugandan manufactured goods in Rwanda, Kenya, Sudan, the DR Congo and Tanzania. In 2006 this stood at an impressive US\$ 223.89 million, corresponding to around 83% of official exports to these countries over the same period.

populations. In the case of livestock trade in the Horn drylands regions, Akilu et al. (2013) argue that this is the result of a systematic bias, as policy-makers tend to come from highland regions and prioritise these agricultural regions over the drier, pastoral lowlands that tend to rely on livestock cultivation. This results in their treatment of “*the activity as economically marginal and illegal, often resulting in the random and punitive enforcement on traders and producers alike, including confiscating livestock and food products from merchants*” (Akilu et al. 2013, p. 10).

Poor data is also an issue: there tends to be a lack of awareness of the scope and nature of NTBs with only the EAC so far creating an effective system to allow reporting of NTBs and monitor follow-up. Similarly, in the case of export bans instituted during the food crisis, governments frequently lacked up-to-date information on stocks and prices to help inform policies. In the case of Malawi, the government had no way of knowing how much maize remained in the country following the imposition of an export ban due to the weak administrative capacity to monitor the informal commerce between traders in Malawi and neighboring countries. Finally, price information seems to be one of the biggest gaps: among traders surveyed by the USAID Compete project in East Africa, this was the biggest constraint to trade (see Figure 4 below).

Figure 5: Most important issues for SADC region food staple value chain participants



Source: USAID COMPETE Regional Value Chain Surveys

However, despite decades of training efforts, capacity at the national and local government level remains a problem. In assessing the dysfunctional nature of seed policy in Uganda, Joughin (2013) notes that the National Seed Certification Service “has had at least 15 years of support but is no nearer undertaking its mandate than it was at the beginning” and all major institutions involved are “weak, dependent on donors, and reluctant to take a bigger role and/or to force the ministry’s hand. In this regard, the initiative by Delpuech and Poulton (2011) to develop a set of comparative indicators on state capacity for agricultural development would allow for a more detailed analysis of how individual government incentives (or their absence) translate into organizational performance. This is also true at the regional

level where, as Haggblade (2011, p. 12) argues “the relative strength of staffing, financing, and leadership varies widely among the RECs, as does their overall performance in managing programs of common interest and the pace of economic integration.”

Financial constraints also play a role here: many RECs’ problems tend to stem from the continual failure of members to meet financial obligations (Khadiagala 2011). For example, Pannhausen (2010) notes that at the time of writing there were only three agricultural experts in the EAC Secretariat. This also helps explain the inability to follow up on the non-enforcement of agreements particularly as, according to a 2012 survey by UNECA (cited in AfDB 2013), many ministries were not aware of some agreed protocols which they were meant to implement.

Finally, the persistence of barriers and harmful policies can additionally be explained by the mixed success of past reform efforts. The aforementioned systematic review by McCorrison et al. (2013) finds that past liberalisation reforms in many African countries tended to only have limited impact on welfare. In most of these cases the interventionist policies of the 1970s and 1980s were financially unsustainable – however, the impact on those losing from reforms were generally not anticipated, and furthermore gains through the reduction of tariff barriers were in many cases negated by incomplete reform processes and the proliferation of NTBs. However, in the eyes of many policy-makers this has contributed to a perception that food security requires self-sufficiency and, as Anderson et al. (2013, p. 2) argue that there is “an inadequate awareness of downsides for countries that (a) use the international market only when there is an unexpected temporary shortfall or surplus of food domestically, or (b) withdraw from exporting when prices spike upwards.”

4.2 Achieving change and durable reforms

The previous section has outlined several explanations as to why economically inefficient trade barrier persist despite numerous international agreements to remove them. This section outlines a few instances in which significant barriers to trade have been overcome. Five of these will be discussed – however what is significant for all of them is their ability to shift the incentives of the key actors involved to either support reforms or to drop their opposition.

Economic growth and move towards more developmental agriculture policy

As countries grow and develop, the share of income spent on food declines and the economy diversifies. This reduces the perceived onus of governments to ensure low food prices and national self-sufficiency, and can increase a country’s focus on improving the international competitiveness of its agricultural crops. Governments shift from an anti-trade towards a more developmental pattern of agricultural trade policy, in which agricultural sectors (both tradable and import-competing) are fostered and in many cases protected. Moreover, in growing economies, governments can seek other sources of revenue as alternatives to trade taxes (such as income or value added taxes). Swinnen (2010) sees economic growth and “the shift in the political-economic equilibria induced by such growth” as a primary reason for the reduction in anti-agricultural policies in many developing countries. Similarly, Aksoy and Onal (2011, p. 21) found that the reform programmes were most likely to be successful and resistant to internal or external shocks if the sector had been able to reorganise itself and “reach a new equilibrium, which led to sustaining growth in output.”

Crises as a window of opportunity

Crises can be a significant driver of reform, allowing for a reorganisation of the institutional apparatus and policy framework governing agricultural policy. Blanchard and Willmann (2007) have shown that a radical change in policy is necessary for an economy to shift from a protectionist to a more liberal state. In Africa, this occurred (at least partially) following the combined impact of fiscal crises and democratisation in the 1980s and 1990s when relatively sweeping processes of liberalisation were initiated (see also Bates and Block 2010).²⁵ Crises can stimulate reforms as they highlight the failures of the previous system. Badu (2013) argues that the 2007/08 food crisis was a window of opportunity for problems in the existing policy framework to be brought forward (including adaptation to climate change, natural resource conservation and how best to open of local food market chains for foreign investment). Central to this is the presence of political entrepreneurs who are able to navigate competing interests and create coalitions that support reform efforts.²⁶ This mirrors Grindle's (2001) analysis of efficiency-oriented reforms that happened against the odds. She finds that these came down to agile, self-aware actors altering the conditions in which others took decisions, resulting in normally binding problems of collective action or information asymmetry being overcome.

Public and interest group pressure

Civil society and parliamentary pressure as well as increasing access to information on the impact of current food staple policies can lead to better policy outcomes. During the recent food crisis, Badu (2013) found that in numerous African countries, including Nigeria, Kenya, Zambia, and Malawi governments mainly acted in response to pressure from civil society and consumer groups. However, public pressure can (and frequently has) led to governments panicking in fear of groups taking to the streets and destabilising governments, which can engender short-term responses (Watson 2013) The media can be of particular significance in this case: Olper et al. (2009) find that in their sample of 60 countries (not limited to Africa) mass media does have a substantive impact on food policy and in developing countries specifically, it leads to a reduction in agricultural taxation. Competition in mass media market tends to in turn reduce distortions in food policies. Benin and Binswanger-Mkhize (2011) likewise find that the development of infrastructure, education, and communications can make it easier for smallholder farmers to organize and make their weight felt in the political arena. They particularly point to the benefits of improving the organizational capacity of farmers' groups, and cooperative and agricultural umbrella groups to engage technically and influence policy.

Policies that address concerns of losers

Given that every process of reforming agricultural trade policies brings with it groups that will lose under the new regime, ensuring a mechanism for compensation that will mollify those likely to block reforms is of central importance. In the nine East African reform processes they study Aksoy and Onal (2011) point to the centrality of stakeholders accepting the redistribution of income

²⁵ Of course, as discussed in the previous section, many of these reforms stalled or did not sufficiently consider the impact on those who lost out in the reform process. As a result they were frequently reversed.

²⁶ Anderson et al. (2013) point out that we currently lack a detailed understanding of the role of bureaucratic organisations and political entrepreneurs: While the literature in economics and econometrics on the role of entrepreneurship has grown, the same is not true in formal political-economic studies

- here durable compensation mechanisms are central in the design of any reform process. Thus, in moving away from a reliance on emergency measures in crises, many also point to the benefits of safety net systems that can be triggered in the case of a crisis (Timmer 2011).

Provision of better information

Just as inadequate information helps explain the persistence trade barriers (and especially non-tariff barriers), addressing these information gaps can be integral to their removal. The COMESA-EAC-SADC online NTB database (www.tradebarriers.org) has been instrumental in drawing policy-makers' attention to the scale of these barriers, with each complaint at minimum addressed in tripartite forums. Similarly, interviewees have pointed to the significance of spatial modelling in demonstrating, for example, the absence of 'the last miles' of rural feeder roads. Work by the USAID East Africa Trade Hub is credited with making policy-makers aware of the economic cost of barriers, with efforts to model the impact of NTBs and the cost savings of their elimination seen as particularly useful in this regard. However, sometimes even the most stark statistics will not lead to the removal of barriers if a strong vested interest is behind it: a World Bank study that showed that 4 million additional Nigerians were in poverty because of import bans failed to change policy (Treichel et al 2011).

Improving agricultural market information as well as food security and nutrition monitoring systems is seen to have promoted government responsiveness in some countries during the food crisis. Badu (2013) highlights the role of the Famine Early Warning Systems Network (FEWS-NET), which has made food price data continuously available to policy makers through monthly newsletters in many southern African countries. However, it can be important for outside agencies to conduct assessments jointly with government departments due to the low levels of trust many policy-makers have in such externally-driven monitoring systems; thus, Badu (2013, p. 15) argues, "unless local systems for food security and nutrition monitoring are strengthened, information for designing interventions to protect the poor and the vulnerable may not be effectively used in the policy-making process." Expanding information on stocks may be a key measure to alert both traders and governments of impending crisis (Wiggins and Keats 2013).

5 Conclusion

The previous three sections have attempted to provide an overview of some of the main debates within the large body of literature on the role, impact and political economy of barriers to trade in food staples in sub-Saharan Africa.

It provides five main messages about the determinants and consequences of food trade policies on food security and the development of staple food value chains in Africa. First, the lack of commitment of governments and RECs towards furthering the implementation of regional policies and agreements result in the persistence of NTBs that severely impact trade of agricultural inputs and staple foods. In particular; domestic and short term inward-looking trade policy measures in reaction to shocks and designed to reduce price volatility and safeguard food security often appear to have an effect opposite of what is expected. Moreover, the resulting volatility of domestic and trade policies reduces incentives for the private sector to invest and develop food staples value chains. Part of this is the result of the difficulty to depart from the traditional high levels of mistrust between the government and private sector, a persistent urban bias and of country specific political economy barriers to reform and market integration. However, as past experience has demonstrated, this can be mitigated through a number of interventions, including strengthening a greater plurality of diverse interest groups as well as the media, addressing concerns of likely losers, providing better information on barriers and their impact, and – in the longer term – promoting economic growth and rural development.

This informs a series of recommendations and suggestions on ways forward to support different actors in furthering welfare-enhancing trade policy reforms for policy-makers and donors:

Making commitments in RTAs more effective and credible:

- 1) **Creating a clear set of rules for interventions** – In terms of the unpredictability and ad-hoc nature of agricultural policies, one frequently cited measure is to develop a clear set of guidelines, rules and thresholds when interventions would be permitted to occur (e.g. clarifying when changes in tariff rates would be instituted or the conditions that would trigger stock releases). While this may be much easier to agree than to actually adhere to in crisis situations, clearer considerations on how to operationalise this through other existing trust-building models would be of benefit (see Chapoto 2009, World Bank 2012).
- 2) **Fostering a coalition for change** – The impact of some East African business and agricultural lobbies on agricultural trade policy has demonstrated that these can be influential if they are well informed, adequately resourced and seen to represent a large constituency. In democracies, donors can have an important role in supporting institutions that focus on improving the accountability of

office-holders. Members of parliament from rural areas, particularly in first-past-the-post systems, also should be seen as key stakeholders with a strong interest in ensuring improved agricultural development.

- 3) **Recognising the limits of regional organisations** – RECs, with the extensive support of donors, have been excellent in the organisation of summits and the development of strategies and policies, but frequently weak on implementation. As has been discussed earlier, there are good reasons for these difficulties but they do suggest that agreements entailing lower levels of commitment, where mutual compliance can be more effectively monitored, would be beneficial (for example, moving towards a greater reliance on mutual recognition over harmonisation on standards and other regulatory measures).

Addressing information asymmetries and issues of trust and credible commitment that exacerbate political barriers to trade

- 4) **Making barriers visible** - The apparent effectiveness of the tradebarriers.org initiative in enabling ordinary citizens to draw attention to barriers is notable. This relatively low-cost platform has ensured a process by which, at the very minimum, the respective NTB is further investigated and that results are publically reported to the EAC secretariat. This may be worth replicating in other regions, such as West Africa.
- 5) **Recognising how trade reforms might impact the distribution of rents** – The success and sustainability of trade policy reforms differs from country to country and depends on having a degree of consensus among political elites, the private sector and other leading stakeholders. It is therefore essential to view reforms as extended processes that are frequently left incomplete or subject to reversal. Thus, assessing the potential impact of reforms dynamically and over time is essential, as is establishing regular consultative mechanisms where key actors can hold each other accountable for delivering on promises.
- 6) **The centrality of compensation mechanisms** – Given the strong incentives of likely losers of reforms to mobilise against efforts to liberalise markets, it is worth considering what kind of measures and mechanisms would weaken resistance. This is likely to be highly context-specific and requires dialogue and bringing together frequently antagonistic stakeholders.

Improving data collection efforts

- 7) **Better and more accessible data** - Significant efforts have been made in recent years, to improve the collection and quality of data on prices, food production and other key variables in this area, but many countries still face substantial data gaps that limit the ability to devise evidence based trade and agricultural policies – especially in crisis situations. Furthermore, having analysis that more effectively conveys the impact of barriers (e.g. through quantification) and of underinvestment in infrastructure (through geo-spatial imaging) could help make a more compelling case to address these constraints.
- 8) **Understanding the structure of informal trade** – The alternative to informal trade for many traders is not formal trade, but rather not trading at all. Given the scale of informal trade, and the many barriers and costs associated with formal border crossings, particularly in many of the drylands regions, a better understanding of the unique challenges faced for traders in this area is essential. Rather than criminalising those engaged in informal commerce, it would be advisable to focus on facilitating formal trade while also focusing on the providing safer conditions for informal traders.

The above analysis and recommendations on institutional and policy reforms may contribute to supporting resilience in the drylands of Sub-Saharan Africa in the following ways:

Reducing exposure to shocks

- 1) **Reducing barriers on inputs** – Better access to organic and inorganic fertilisers, as well as new, drought-resistant seeds and crops varieties can allow for the adoption more intensive production systems, increased productivity and even the replenishment of degraded lands. Thus, mutual recognition of fertiliser blends and standards and new seeds varieties could increase the transparency of trade in inputs and increase producers' confidence in the quality of purchased products.
- 2) **Focusing on barriers to investment and technology transfer** - Access to markets through road construction, better transport and storage as well as to extension services is important to support increased productivity and the adoption of new climate-resilient technologies, which can help reduce the occurrence of shocks. It is therefore essential to improve the efficient transfer of information (especially through extension services) and to provide capital and incentives to invest in the new technologies.

Reducing sensitivity to shocks

- 3) **Fostering agricultural trade services** – Discretionary and reactive domestic and trade policies in reaction to food price crises have generally not had their intended effect. Thus far, African regional trade agreements have few commitments in this regard. Fostering initiatives of sub-regional coalitions of willing RTA members to fast track implementation of agreements could be a first step lead towards more transparency in policy making, at least among participating countries.
- 4) **Linking the development of cross-border transport corridors with projections of environmental change**- Changing climatic and demographic trends will inevitably affect both the supply and demand for food staples. Trade and agricultural policy-making and investments will likely need to respond to this, particularly in addressing which trade and transport corridors may be needed to connect current and future surplus agricultural production areas with deficit areas.

Improving coping capacity

- 5) **Linking regional food security and social protection efforts to trade** – Regional efforts to develop food security programmes and social safety net measures are only progressing slowly and thus far they have generally not considered in too much detail the potential relevance of trade policies. Further, in many RECs and national governments there is evidence of insufficient awareness of the types of problems faced in value chains specific to drylands regions.
- 6) **Countering negative impacts of trade liberalisation and facilitation** - It will be important to assess the potential long-term impacts of trade agreements and

also of large-scale trade facilitation measures on particularly vulnerable groups, many of whom have adapted to a lack of formality in cross-border trade. A variety of tools, including Poverty and Social Impact Assessments, can be applied to changes in trade policy in order to assess impacts on different population groups.

Furthermore, there are some issues that could benefit from further study. These are:

The politics of barriers

In terms of the national and regional policy framework, more work focusing on the structural factors inhibiting the effective implementation of regional reforms could help explain how to ensure agreements are in fact meaningful. While it appears clear that the national interest supersedes regional integration goals for most decision-makers, country-case study work examining when regional agreements and integration processes have been seen as binding and when not would contribute to ensuring a more predictable process and greater trust across the region. Closely related to this, a more politically aware and regionally specific analysis of the likely benefits and feasibility of harmonisation vs. mutual recognition for certain issues (most notably standards) could be useful.

There would be great value in a better understanding of agricultural advocacy organisations. Farmers' organizations in southern and eastern Africa have begun showing an impact in bringing about changes for national and regional trade and agriculture policies. However the number of these organizations is still small, particularly in the dairy and livestock sectors and in the remotest regions. Therefore, examining the determinants of lobbying and advocacy, studying institutional structures, sources of financial and political support, and networks factors that explain varying degrees of success could explain how such organizations might be replicated across the region.

Furthermore, the more than 300 reported cases of NTBs on tradebarriers.org would allow for some quantitative analysis on the determinants for the successful removal of reported barriers. Closely related to this, ensuring greater access to independently monitored data on prices, food stocks and public and private storage capacities (as is currently the case in South Africa) at the regional level would help remove some of the uncertainties and information asymmetries around these issues.

Assessing the impact of trade barriers

In terms of improved methods towards assessing the impact of trade barriers, there is considerable scope for more spatial analysis, and in particular taking into consideration crop substitution and complementarity in diets, as well as the impact of infrastructure on the patterns of trade. For instance combining spatial analysis and LOP methodologies could help reshape maps according to road quality and be used as a tool for targeting infrastructure investments by identifying areas where infrastructure development would have the highest impact in terms of facilitated access to markets and services. There would also be utility in a better assessment of spatial and time arbitrage bottlenecks, and their impact on incentives for storage.

Furthermore, there is scope for more economic analysis quantifying the impact of the volatility and discretionary use of trade policies on food safety and welfare, as has been carried out in Nigeria (Treichel et al. 2011) and in the EAC region (see, e.g. Karugia et al. 2011, Gourdon and Cadot 2013). Further, having a clearer assessment of the barriers to and cost of market entry for smallholders may help identify how these could best be ameliorated (Cadot et al. 2010). Finally, Anderson

et al. (2013) and others pointed out that the quality of institutional variables for political economy cross-country analysis could still be significantly improved in order to understand which institutional factors significantly influence rates of assistance, and furthermore, how less easily quantifiable aspects, like policy entrepreneurship and leadership can be better measured and compared.

Scope for the analysis of the bottlenecks in the staple food value chains

The increasing availability of detailed, high-quality value chain analyses provides better knowledge about bottlenecks and in particular about the importance of the provision of quality logistic infrastructure. The low value and low weight-to-value of staples food creates issues of competitiveness in a world of high transport prices. However, the development of the cassava value chain in various countries to provide stable supply to the industry shows that such constraints can be overcome. There is still scope for more knowledge about the determinants of price transmission along the value chain, as well as on factors determining its governance and the distribution of value addition that often stiffens the profitability and the incentive to participate in staple food supply chains.

More work also appears necessary in order to identify the drivers of demand for staple foods: urbanisation, the development of breeding, and the food industry, among others. The large increase in urban population and changes in diet with increased consumption of meat products are likely to increase the demand for staple food both for human and animal consumption. As the recent food crisis has highlighted, a full reliance on imports to feed urban population is not sustainable in the long run, nor is a full self-sufficiency strategy.

The combination of spatial and LOP analysis is promising for the identification and targeting of infrastructure investment. More analysis should also inform policy-makers about the relevance of various infrastructure investments for the development of the value chain. In other words, should they continue focusing on corridors that according to Byers and Rampa (2013) are likely to leave 90% of smallholders out of value chains, or should they focus on the finale mile by developing rural feeder roads?

Finally, input subsidy programs re-emerged across sub-Saharan Africa (SSA) in the mid-2000s, although with the intent to foster private sector development and to rely on more focused targeting (“smart” vs. “universal” input subsidy programmes).²⁷ Their results are still very contested and location specific, in particular when targeting seems ubiquitous and potentially captured by political economy forces. (Baltzer and Hansen, 2011; Ricker-Gilbert et al., 2012).

²⁷ A selection of input subsidy programmes: Malawi, Agricultural Input Support Programme/Farm Input Support Programme (AISP); Zambia, Fertilizer Support Programme (ZFSP); Ghana, Fertilizer Subsidy Programme (GFSP); Tanzania, National Agricultural Input Voucher Scheme (NAIVS);

References

- Abdullateef U, Ijaiya AT (2010) Agricultural trade liberalization and food security in Nigeria. *Journal of Economics and International Finance* 2(12): 299–307.
- AECOM (2011) 'Technical Report: 2011 Audit of the Implementation of the SADC Protocol on Trade' USAID Southern Africa Trade Hub.
- AfDB (2013) *African Economic Outlook 2013*. Tunis: African Development Bank.
- Africa, J. G. K., & Ajumbo, G. (2012). Informal cross border trade in Africa: Implications and policy recommendations. *Africa Economic Brief*, 3(10).
- Afun-Ogidan, D., & de Weijer, F. (2012). Regional approaches to food security in Africa. ECDPM
- Aker, J.C., M.W Klein, S.A. O'Connell, and M. Yang, (2010) Borders, Ethnicity and Trade. NBER Working Paper 15960.
- Aklilu, Y., Little, P. D., Mahmoud, H., & McPeak, J. (2013). Market access and trade issues affecting the drylands in the Horn of Africa: Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre.
- Aksoy, Ataman and Anil Onal (2011). "Consensus, Institutions, and Supply Response: The Political Economy of Agricultural Reforms in Sub-Saharan Africa." Policy Research Working Paper 5782, World Bank.
- Anania, G. (2013). Agricultural export restrictions and the WTO: What options do policy-makers have for promoting food security?. ICTSD. Draft paper. July (<http://ictsd.org/i/library/173466/>)
- Anderson K. (2013) *The political economy of agricultural price distortions*, Cambridge and New York: Cambridge University Press.
- Anderson K., M. Brückner (2012), *Distortions to Agriculture and Economic Growth in Sub-Saharan Africa*, The World Bank Policy Research Working Paper 6206.
- Anderson K., M. Ivanic, W. Martin (2013), *Food Price Spikes, Price Insulation, and Poverty*, Policy Research Working Paper 6535
- Anderson K. and Nelgen S. (2012) *Trade Barrier Volatility and Agricultural Price Stabilization*, *World Development*, 40, 1.
- Badu, S.C., (2013), *Policy process and food price crisis - A framework for analysis and lessons from country studies*, WIDER Working Paper No. 2013/070
- Baltzer, K. T., & Hansen, H. (2011). *Agricultural input subsidies in Sub-Saharan Africa*. Ministry of Foreign Affairs of Denmark. Danida.
- Bates, R. H. (1981). *Markets and states in tropical Africa: the political basis of agricultural policies*. University of California Press.
- Bates, R. H., & Block, S. (2010). Agricultural Trade Interventions in Africa. *The Political Economy of Agricultural Price Distortions*, 304-331.

- Benin, S., and Binswanger-Mkhize, H. P. (2011) The political economy of agricultural incentives and public expenditures, with special reference to Africa'ASTI/FARA Working Paper 20.
- Binswanger, H. P., & Deininger, K. (1997). Explaining agricultural and agrarian policies in developing countries. *Journal of Economic Literature*, 35(4), 1958-2005.
- Birner, R. and D. Resnick (2011). 'Policy and Politics for Smallholder Agriculture'. *Development Policy Review*, 28 (1): 97-115
- Blanchard, E., & Willmann, G. (2007). 'Political Stasis Or Protectionist Rut'. *Policy Mechanisms for Trade Reform in a Democracy*. Christian-Albrechts-University of Kiel, Department of Economics.
- Booth, D. (2013) 'Three forms of political economy analysis: Origins and uses' Presentation for AusAID, Canberra, 21 May 2013.
- Bouët, A., Mishra, S. and Roy, D. (2008) 'Does Africa trade less than it should, and if so, why? The role of market access and domestic factors'. IFPRI Discussion Paper 00770. Washington, DC: IFPRI.
- Brenton P., A. Portugal-Perez, J. Regolo, (2013), "Food Prices, Road Infrastructure, and Border Effects in Central and Eastern Africa".
- Broadman, H. G. (2007). Africa's silk road: China and India's new economic frontier. World Bank Publications.
- Bromley, D., Cook, A., Sing, S., & Van Dusen, N. (2011). Regional Agricultural Transport and Trade Policy Study. *West Africa Trade Hub Technical Report*, (41).
- Bryan, S. (2013). 'A cacophony of policy responses: Evidence from fourteen countries during the 2007/2008 food price crisis' WIDER Working Paper No. 2013/029.
- Cadot O., L. Dutoit, M. Olarreaga. (2010), The Cost of Moving out of Subsistence, in 'Food price and rural poverty, Ed. M. A. Aksoy and B. Hoekman, World Bank and CEPR.
- Cadot O., J. Gourdon (2011), Assessing the price-raising effect of NTMs in Africa
- Chambers, V., M. Foresti and D. Harris (2012) "Final report: Political Economy of Regionalism in West Africa – Scoping Study and Prioritisation" London: ODI
- Chapoto, A. (2012). *The Political Economy of Food Price Policy: The Case of Zambia* (No. UNU-WIDER Research Paper WP2012/100).
- Chemonics International (2010) 'A Regional Strategy for the Staple Foods Value Chain in Eastern Africa: A Practical Approach to Improving Staple Foods Competitiveness and Food Security.' USAID Compete
- Coulter, J. and Poulton, C. 2001. Cereal market liberalization in Africa. In: *Commodity Market Reforms: Lessons of Two Decades*. Akiyama, T., Baffes, J., Larson, D.F., and Varangis, P. (eds.) Washington D.C.: World Bank
- Delpuech, C., and Poulton, C. (2011). Can state capacity for agricultural development be compared across countries? Insights from Africa.
- Dorosh, P., Wang, H. G., You, L., & Schmidt, E. (2010). Crop production and road connectivity in Sub-Saharan Africa: a spatial analysis. *World Bank Policy Research Working Paper Series, Vol.*
- Engel J., M-A. Jouanjean, (2013), Barriers to Trade in Food Staples in West Africa: An Analytical Review, ODI report
- Galtier (2013, Managing food price instability in developing countries A critical analysis of strategies and instruments, A savoir 17, AFD, CIRAD
- Gorodnichenko, Y., L. Tesar. (2009). Border Effect or Country Effect? Seattle May Not Be so Far from Vancouver After All. *American Economic Journal: Macroeconomics*, 1(1):219-241

-
- Grindle, M. (2001). In quest of the political: The political economy of development policymaking. *Frontiers in Development Economics: The Future in Perspective*, pp. 345-380.
- Haggblade, S. et al. (2012) "Staple Food Market Sheds in West Africa" MSU International Development Working Paper
- Haggblade, S. (2013). Unscrambling Africa: Regional Requirements for Achieving Food Security. *Development Policy Review*, 31(2), 149-176.
- Haggblade, S., & Nyembe, M. (2008). Commercial dynamics in Zambia's cassava value chain. *Food Security Research Project Working Paper*, 32.
- Harris, D., V. Chambers and M. Foresti (2011) "The Political Economy of Regional Integration and Regionalism in West Africa: A Scoping Exercise" Draft Literature Review.
- Hartzenberg, T. (2011). *Regional integration in Africa* (No. 2011-14). Staff working paper ERSD.
- Headey D. (2010) Rethinking the global food crisis: the role of trade shocks, *Food Policy*, 36.
- Hellman, J. (1998) "Winners Take All. The Politics of Partial Reform in Postcommunist Transitions," *World Politics* 50(2): 203-34.
- Hettige, H. (2006) *When do rural roads benefit the poor and how? An in-depth analysis based on case studies*. Manila: Operations Evaluation Department, Asian Development Bank.
- Hoffman, B. (2013) 'Political Economy of Rice in Sierra Leone' World Bank.
- Jayne, T. S., & Tschirley, D. (2009, October). Food price spikes and strategic interactions between the public and private sectors: Market failures or governance failures. In *meeting "Institutions and Policies to Manage Global Market Risks and Price Spikes in Basic Food Commodities", Trade and Markets Division, FAO Headquarters, Rome* (pp. 26-27).
- Johnson, M. (2011) 'Lobbying for trade barriers: a comparison of poultry producers' success in Cameroon, Senegal and Ghana' *Journal of Modern African Studies* 49(4), pp 575-599.
- Joughin, J. (2013) 'The Political Economy of Seed Reform in Uganda: Promoting the Development of a Regional EAC Market' World Bank.
- Jouanjean, M.A., (2013), Targeting infrastructure development to foster agricultural trade and market integration in developing countries: an analytical review, ODI report
- Kalaba, M. (2012) 'Non Tariff Measures along the Beira Corridor: Impact on Cross-Border Trade' Barriers to Agriculture and Trade 2(5). USAID and NEPAD Business Foundation.
- Karapinar B. and Haberli C. (2010) *Food Crises and the WTO: World Trade Forum*, Cambridge University Press, Cambridge, UK.
- Karugia, J., Wanjiku, J., Nzuma, J., Gbegbelegbe, S., Macharia, E., Massawe, S., ... & Kaitibie, S. (2011). The impact of non-tariff barriers on maize and beef trade in East Africa.
- Khadiagala, G. M. (2011). *Institution Building for African Regionalism* (No. 85). Asian Development Bank.
- Keyser, J. (2012) 'Africa can feed Africa: Removing Barriers to Regional Trade in Food Staples' Working Paper
- Kherallah, M., Delgado, C.L., Gabre-Madhin, E.Z., Minot, N. and Johnson, M. 2000. 'The road half travelled: agricultural market reform in sub-Saharan Africa'. Washington, DC: IFPRI.

-
- Kilima, F., Chung, C., Kenkel, P., & Mbiha, E. R. (2008). Impacts of market reform on spatial volatility of maize prices in Tanzania. *Journal of Agricultural Economics*, 59(2), 257-270.
- Korinek J. and J. Bartos (2012). Multilateralising Regionalism: Disciplines on Export Restrictions in Regional Trade Agreements. OECD Trade Policy Papers No. 139.
- Magalhaes, J. (2010). "Regional Sanitary and Phytosanitary Frameworks and Strategies in Africa." Report for the Standards and Trade Development Facility.
- Magrini E., P. Montalbanob, S. Nenci, L. Salvatici, (2013). Agricultural trade distortions during recent international price spikes: what implications for food security? ETSG 2013, Birmingham, 15th Annual Conference, 12-14 September 2013 University of Birmingham.
- Martin W., K. Anderson., 2012. Export restrictions and price insulation during commodity price booms, *American Journal of Agricultural Economics*, 94, 1.
- Mason, N. 2011. Rewarding Loyalty – Election Outcomes and Government Subsidized Fertilizer Allocation in Zambia. PhD Dissertation, Department of Agricultural, Food, and Resource Economics. Michigan State University, East Lansing, MI.
- Mason, N. M., Jayne, T. S., & Walle, N. V. D. (2013). Fertilizer Subsidies and Voting Patterns: Political Economy Dimensions of Input Subsidy Programs. In *2013 Annual Meeting, August 4-6, 2013, Washington, DC* (No. 149580). Agricultural and Applied Economics Association.
- Mitra S. and Josling T. (2009) Agricultural Export Restrictions: Welfare Implications and Trade Disciplines, IPC Position Paper, Agricultural and Rural Development Policy Series. International Food Agricultural Trade Policy Council, Washington, DC.
- McCorrison S, Hemming DJ, Lamontagne-Godwin, JD, Parr, MJ, Osborn J, Roberts PD (2013) *What is the evidence of the impact of agricultural trade liberalisation on food security in developing countries? A systematic review*. London: EPPICentre, Social Science Research Unit, Institute of Education, University of London.
- Moser, C., Barrett, C. and Minten, B. (2005) 'Missed opportunities and missing markets: spatio-temporal arbitrage of rice in Madagascar'. Mimeo, Colgate.
- MSU (2010) 'Patterns and Trends in Food Staples Markets in East ern and Southern Africa: Identification of Priority Investments and Strategies for Developing Markets and Promoting Smallholder Productivity Growth.'
- Mwanaumo, A., Jayne, T. S., Zulu, B., Shawa, J. J., Mbozi, G., Haggblade, S., & Nyembe, M. (2005). *Zambia's 2005 Maize Import and Marketing Experiences: Lessons and Implications* (No. 54615). Michigan State University, Department of Agricultural, Food, and Resource Economics
- Neven, D. and M. Demont (2010) 'The Impact of the Financial and Food Crisis on West African Rice Markets: Value Chain and Consumer Perspectives on Response Strategies'
- Olper, A., Falkowski, J., & Swinnen, J. (2009). Political reforms and public policies: Evidence from agricultural protection.
- Pannhausen, B (2010) - Regional Agricultural Trade in East Africa - A focus on Kenya, Tanzania and Uganda (GTZ)
- Pannhausen, C. and B. Untied (2010) ' Regional Agricultural Trade in West Africa A focus on the Sahel region' GTZ
- Porto, G., (2005). "Informal Export Barriers and Poverty ", *Journal of International Economics* , 66, 447-70.

-
- Porto, G., Depetris Chauvin, N. and Olarreaga, M. (2011). 'Supply chains in export agriculture, competition and poverty in sub-Saharan Africa'. Washington, DC: World Bank/CEPR.
- Raballand, G. and Macchi, P. (2008) 'Transport prices and costs: the need to revisit donors' policies in transport in Africa'. BREAD Working Paper 190.
- Raballand, G., Macchi, P. and Petracco, C. (2010) *Rural road investment efficiency: Lessons from Burkina Faso, Cameroon, and Uganda*. Washington, DC: World Bank.
- Raballand, G. and Teravaninthorn, S. (2009) *Transport prices and costs in Africa: A review of the main international corridors*. Washington, DC: World Bank.
- Rampa, F., Afun-Ogidan, D., & van Seters, J. (2012). Regional approaches to food security in Africa. Brussels and Maastricht: ECDPM.
- Ricker-Gilbert J., T. Jayne, G. Shively, Addressing the "Wicked Problem" of Input Subsidy Programs in Africa: A Review, 2012 meeting of the Agricultural and Applied Economics Association, Seattle, Washington, 14 August 2012
- Rodrik, D. (1996). Understanding economic policy reform. *Journal of economic Literature*, 34(1), 9-41
- Rolland J-P, A. Alpha (2011) Analyse de la cohérence des politiques commerciales en Afrique de l'Ouest, Département de la recherche, AFD
- Rutten M., Shutes L. and Meijerink G. (2011) Sit down at the ball game: How trade barriers make the world less food secure, *Food Policy*, 38.
- Staatz, J. N. Dembele, V. Kelly, and R. Adjao (2008) 'Agricultural Globalisation in Reverse: the Impact of the Food Crisis in West Africa' Background Paper for the Geneva Trade and Development Forum.
- Swinnen, J. F. (2010). The political economy of agricultural and food policies: recent contributions, new insights, and areas for further research. *Applied Economic Perspectives and Policy*, 32(1), 33-58.
- Swinnen, J. F. M., A. Vandeplas, and M. Maertens. 2010. "Governance and Surplus Distribution in Community Value Chains in Africa." In *Food Security in Africa: Market and Trade Policy for Staple Foods in Eastern and Southern Africa*, edited by A. Sarris and J. Morrison, 77-98. Cheltenham: Elgar, and Rome: FAO.
- Teravaninthorn, S., and Raballand, G. (2008) 'Transport Prices and Costs in Africa: A Review of the Main International Corridors'. Africa Infrastructure Country Diagnostic (AICD) Working Paper 14. Washington DC: World Bank.
- Timmer, C.P., W. Falcon and S. Pearson (1983) "Food Policy Analysis." The World Bank.
- Treichel, V., M. Hoppe, O. Cadot and J. Gourdon (2011) Import Bans in Nigeria Create Poverty. World Bank Policy Note No. 28.
- UNECA and AU (2013) 'Assessment of progress on regional integration in Africa' Meeting of the Committee of Experts of the Sixth Joint Annual Meetings of the ECA Conference of African Ministers of Finance, Planning and Economic Development and AU Conference of Ministers of Economy and Finance.
- UN Women (2011), *Unleashing the Potential of Women Informal Cross Border Traders to Transform Intra-African Trade*.
- USAID (2011), *Agribusiness and trade Promotion (USAID ATP) & Expanded agribusiness and trade promotion (USAID EATP) annual progress report October 2010 - September 2011*
- USAID, (2011) *Regional agricultural transport and trade policy study*. West Africa Trade Hub Technical Report 41. Washington, DC: USAID.
- USAID, (2012) 'Women in Cross-Border agricultural trade', Policy Brief no.4 October.

USAID COMPETE (2010)

Van de Walle, N. (2001). *African economies and the politics of permanent crisis, 1979-1999*. Cambridge University Press. Versailles B., (2012), Market Integration and Border Effects in Eastern Africa, CSAE Working Paper WPS/2012-01

Watson, D.(2013). '*Political Economy Synthesis: The Food Policy Crisis*'. WIDER Working Paper 2013/(forthcoming). Helsinki: UNU-WIDER.

Wiggins, S. and S. Keats. (2013) 'Looking back, peering forward: what has been learned from the food price spike of 2007-2008?' ODI Briefing 81.

Winters, L. A. (2002). Trade liberalisation and poverty: what are the links?. *The World Economy*, 25(9), 1339-1367.

Wodon and Zaman (2010) 'Higher Food Prices in Sub-Saharan Africa: Poverty Impact and Policy Responses' *World Bank Research Observer* 25(1)

World Bank (2012) *Africa can help feed Africa: Removing barriers to regional trade in food staples*. PREM Africa Region Report 66500-AFR. Washington, DC: World Bank.

Zerelli, S. and A. Cook (2010). "Trucking to West Africa's Landlocked Countries: Market Structure and Conduct, USAID West Africa Trade Hub." Technical Report No. 32.

Annex: Effect of non-tariff barriers on trade in sub-Saharan Africa

Effect (price of distance equivalent)	Country/product coverage	Border effect	
Cadot O., J. Gourdon (2011), Assessing the price -raising effect of NTMs in Africa			
Price effect	Africa	On average, SPS measures raise the domestic prices of foodstuffs by about 13% in sub-Saharan Africa.	
Aker, J.C., M.W Klein, S.A. O'Connell, and M. Yang, (2010) Borders, Ethnicity and Trade. NBER Working Paper 15960.			
Distance effect	Niger – Nigeria – deviation from the LOP	Price differences vary from 8% to 24% regarding if the people are from the same ethnic group or not.	
Versailles B., (2012), Market Integration and Border Effects in Eastern Africa, CSAE Working Paper WPS/2012-01			
Price effect	Burundi (BDI), Kenya (KEN), Rwanda (RWA), Tanzania (TZA), Uganda (UGA)	The border coefficient to be significant, moving prices between 13 and 20 percent away from the LOP benchmark.	
		A distance of 100 km between two cities adds another 13 percent to departures from the LOP	
Distance effect - km	All goods - Simple border effect - without 2008 (Kenya crisis)	Dist. Eq. - Simple border effect	116
		Dist. Eq. - Border effect controlling for Nominal Exchange rate and Doing business variables	2450
		Dist. Eq. (Bur-Ken) - Simple border effect	284025
		Dist. Eq. (Bur-Rwa) - Simple border effect	518
		Dist. Eq. (Bur-Uga) - Simple border effect	11790
		Dist. Eq. (Ken-Rwa) - Simple border effect	76880
		Dist. Eq. (Ken-Uga) - Simple border effect	5962
		Dist. Eq. (Rwa-Uga) - Simple border effect	9442
	Staple food (5 items)	Dist. Eq. - Simple border effect	920
		Dist. Eq. - Border effect controlling for Nominal Exchange rate and Doing business variables	220
Fruits and vegetables (7)	Dist. Eq. - Simple border effect	9	

	items)	Dist. Eq. - Border effect controlling for Nominal Exchange rate and Doing business variables	896
	Other foods	Dist. Eq. - Simple border effect	90
		Dist. Eq. - Border effect controlling for Nominal Exchange rate and Doing business variables	29
	Other goods	Dist. Eq. - Simple border effect	814
		Dist. Eq. - Border effect controlling for Nominal Exchange rate and Doing business variables	8416

Effect (price of distance equivalent)	Country/product coverage	Border effect
Brenton P. , A. Portugal-Perez, J. Regolo, (2013), "Food Prices, Road Infrastructure, and Border Effects in Central and Eastern Africa".		
Price effect	Burundi (BDI), Djibouti (DJI), Democratic Republic of Congo (DRC), Ethiopia (ETH), Kenya (KEN), Mozambique (MOZ), Malawi (MWI), Sudan (SDN), Somalia (SOM), Rwanda (RWA), Tanzania (TZA), Uganda (UGA) and Zambia (ZMB).	Our estimates suggest that road distances and travelling time between towns as well as border frictions largely impede market integration in the region. On average, distance increases price differences between countries by 17% in the region and, once controlled for distance, price differences are estimated to be 11.3% larger between than within countries.
Distance effect - km		Border frictions have a substantial effect on price differentials. After controlling for inter-town distance, price differentials for towns separated by a border increase by 11.3% on average in the region.
		Average effect on prices of crossing a border in East and Central Africa - crossing a border in the region corresponds, on average, to a distance-equivalent of 110km.
		We find that crossing a border has the same effect on relative prices as travelling 518 hours between towns of a same country.
	Kenya-Ethiopia	704
	Malawi-Mozambique	6
	Burundi - Rwanda	20
	Ethiopia - Sudan	80
	Kenya - Sudan	0
	Burundi - Tanzania	0
	Kenya - Tanzania	0
	Tanzania - Mozambique	9
	Malawi - Tanzania	168
	Rwanda - Tanzania	55
Kenya - Uganda	0	
Uganda - Rwanda	19	
Uganda - Sudan	0	
Uganda - Tanzania	0	
Zimbabwe - Mozambique	938	
Zimbabwe - Malawi	797	
Zimbabwe - Tanzania	0	
Burundi - DR Congo	87	
DR Congo - Rwanda	50	
DR Congo - Tanzania	233	
DR Congo - Uganda	449	
DR Congo - Zimbabwe	279563	
Somalia - Djibouti	32	
Ethiopia - Somalia	8053677	
Kenya - Somalia	2510	

Table 1: Effect of non-tariff barriers on trade in sub-Saharan Africa

Effect (price of distance equivalent)	Country/product coverage	Border effect	
Brenton P. , A. Portugal-Perez, J. Regolo, (2013), "Food Prices, Road Infrastructure, and Border Effects in Central and Eastern Africa".			
Distance effect - km	Deviation from RLOP	Kenya-Ethiopia	7
		Malawi-Mozambique	4
		Burundi - Rwanda	30
		Ethiopia - Sudan	0
		Kenya - Sudan	53
		Burundi - Tanzania	6
		Kenya - Tanzania	0
		Tanzania - Mozambique	10
		Malawi - Tanzania	16
		Rwanda - Tanzania	3
		Kenya - Uganda	12
		Uganda - Rwanda	51
		Uganda - Sudan	32
		Uganda - Tanzania	117
		Zimbabwe - Mozambique	64
		Zimbabwe - Malawi	51
		Zimbabwe - Tanzania	-4
		Burundi - DR Congo	16
		DR Congo - Rwanda	7
		DR Congo - Tanzania	14
DR Congo - Uganda	250		
DR Congo - Zimbabwe	6		
Somalia - Djibouti	50		
Ethiopia - Somalia	0		
Kenya - Somalia	15		



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