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Assessing agriculture & food markets in Eastern and Southern Africa: an agenda for regional competition enforcement

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CCRED African Market Observatory Working Paper

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The Centre for Competition, Regulation and Economic Development (CCRED) is an academic research centre housed in the School of Economics at the University of Johannesburg's College of Business and Economics. CCRED specialises in research, teaching and advisory services for government and non-governmental organisations on competition policy, industrial development and value chains in Southern and East Africa.

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The **African Market Observatory** initiative monitors prices and assesses other market dynamics of staple foods. The market observatory is motivated by the need to analyse agricultural value chains in order to support economic development in the context of adapting to the effects of climate change in Africa. For more information on the market observatory and other publications, visit <https://www.competition.org.za/africanmarketobservatory>

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Executive Summary

- The Eastern and Southern Africa (ESA) region remains poorly integrated and cross-border markets are not working effectively. This underpins a double blow of high food prices for urban consumers, and low prices to farmers.
- The region should be able to produce abundant food to meet the population's needs and to export yet remains a net importer and is increasingly vulnerable to extreme weather linked to climate change.
- Poor data hampers the analysis of food markets. The African Market Observatory (AMO) collects data on wholesale prices in different locations to paint a more accurate picture of the market outcomes in each country and across the region. The AMO pilot has focused on maize, maize meal, soybeans, rice and fertilizer in and across Kenya, Malawi, Tanzania, Uganda, Zambia and Zimbabwe.
- It points to major concerns with market outcomes with large excess margins being made between producing and consumer areas, as well as substantial changes in prices over short periods of time. The explanations include possible anti-competitive conduct which need further investigation. Moreover, the assessment suggests that shocks from climate change can be exploited in concentrated markets to drive prices up far above reasonable levels. Effective regional competition enforcement is more important than ever.
- There are very large differences in maize price levels across local markets and changes over time, which are much greater than justified by transport, trading or storage costs. In 2021 there were extremely low prices of well under US\$150/t in Zambia, Malawi and south-west Tanzania at the same time as prices well above US\$400 in Kenya and Uganda. While weather patterns and trade restrictions play a role, the differences also point to big margins being exploited by intermediaries, the fact that regional markets are poorly integrated in practice, as well as the challenges of inadequate storage facilities and market information.
- A preliminary review of prices of maize meal at the consumer level point to outliers across countries – prices in Malawi stand out as exceptionally high, especially relative to the low grain costs. Tanzania and Zimbabwe maize meal prices also appear high when maize prices are considered. Generally, we observe that a decrease in producer prices does not translate into lower consumer prices across the region. This is a further indication that markets are not working well in the region and raises a red flag for competition enforcement.
- Soybean prices reveal even bigger excess margins being made between locations in the region than for maize prices. There have also been very large variations in soybean prices in just a few months which appears to mean that the large traders have been able to make big margins on crops which farmers have sold at harvest at low prices. This may be reinforced by influence over government policies.
- Transport costs may be higher than they should be however, they do not come close to explaining the differences observed across relatively small geographic distances. Moreover, the

large traders and processors operating across the region have their own trucking and storage services. Smaller market participants are thus being undermined.

- Markets are concentrated at different levels of the value chains such as in trading and processing. A review of mergers indicates the expansion of multinational businesses across the region. While these firms may bring investment, they also raise concerns about market power.
- There are big gaps in data on fertilizer prices in ESA, as the single largest input cost for much of commercial agriculture. Extremely high fertilizer prices due to international developments are significant for production in the coming season, heavily impacting on the decisions farmers will make on planting. It is not clear the extent to which international price changes are being further exacerbated by regional market dynamics.
- The La Niña weather phenomenon in 2020/21, which is continuing for a second consecutive year into 2022, has meant relatively good weather conditions and rainfall in most of ESA. However, it has brought poor rainfall and drought conditions in parts of Kenya, and delayed rains and then flooding in other areas such as parts of Malawi. It has also brought severe drought in Brazil (the worst in a century) and Argentina which has impacted on global prices.
- The geography of the ESA region means that while some parts are climate hotspots, and there will be more frequent extreme weather events, other areas in the region have excellent growing conditions, water and good soils. More effective and competitive cross-border markets are therefore urgently required for demand in one area of the region to be met by abundant supplies in other parts of the region, including by smaller farmers.
- The market observatory pilot therefore emphasizes the **central role of regional competition enforcement**, complementing and working hand-in-hand with national authorities. The success of the CCC should be at the heart of the effective competition regime in the Tripartite, and leading by example in the AfCFTA competition agenda.
- Regional integration needs a **strong competition champion** for cross border markets, in the shape of advocacy, enforcement and merger review. The analysis points to:
 - the importance of the CCC substantially expanding capacity, as it is doing;
 - deepening the collaborative working-relationships with national authorities, and linking with the East African Competition Authority;
 - expanding the competition advocacy and policy role; and
 - the need for ongoing market intelligence gathering for enforcement actions.
- **Competition advocacy and policy** is essential, as many of the factors undermining effective regional competitive markets include policy aspects. Regulatory barriers which undermine trade also reinforce the market power of companies within countries. It is crucial to have an institution which speaks-up for competitive markets if regional integration is to work, and to demonstrate the harm from weak competition. Examples include: trade restrictions

exacerbating price spikes; and, lack of harmonization on fortification reinforcing market power and high-mark-ups in some countries.

- In **merger evaluation** our analysis points to mergers determined at the national level which are nevertheless part of evolving **regional concentration**. A collaborative approach to merger evaluation across the region is essential, to share information and strengthen the knowledge base, alongside the efficient determination of mergers at both regional and national levels, in line with their geographic nexus.
- **Cartel detection** requires data for both **structural and behavioural screening**. The market observatory pilot has provided a starting point which can be deepened in targeted areas through collaborative work with national authorities, while the set of products assessed should be widened, taking into account those likely to cartelized.
- Information, market intelligence gathering and knowledge are the key ingredients for competition assessment. The market observatory can play an important role in **building the knowledge base** on cross-border markets for priority products.



1. Introduction

This report reviews the results of the pilot phase of the African Market Observatory (AMO). It is a synthesis of the three reports produced for the COMESA Competition Commission (CCC) over the course of the pilot, including the initial motivation in the data gaps, through the assessment of market outcomes, and the initial assessment of market structures within and across countries.

The core objective of the AMO is to collect data to enable assessment of market outcomes and reasons why markets are not working well, especially for smaller producers and low-income consumers. The AMO provides the basis for inquiring into levels of regional concentration including through mergers, possible anti-competitive conduct such as collusion, and the effects of regulations on competition which can be addressed through advocacy.

We have found that prices vary very substantially across relatively small geographic distances (within countries and across borders) by margins that are much greater than transport costs. Prices are also highly volatile over time. This points to concerns about regional trade and competition which need to be better understood and addressed.

The importance of agriculture and food markets

The agricultural sector is key to fostering economic growth, reducing poverty and improving food security in Eastern and Southern Africa (ESA). It is important to realise the potential to sustainably increase food production to meet the demand from ESA's rapidly expanding urban areas and population. However, Africa has run an average food trade deficit of about \$30bn a year over the last decade. Many countries in ESA are net food importers, despite good soils, land availability and growing conditions in the region as a whole.¹

In most ESA countries, the agricultural sector has been identified as key to realizing a number of economic objectives, including boosting regional trade and investments, fostering rapid industrialization and economic diversification, job creation, and eradicating hunger and poverty (das Nair & Landani, 2020; Hussein & Suttie 2016; SADC Industrialization Strategy Roadmap, 2015 – 2063). ESA has rapidly expanding urban areas and, given the availability of arable land, has great potential for increased food production (Annan et al., 2015). Food production is also a key sector in manufacturing (Kaziboni and Roberts, 2022).

Poor information and high apparent levels of concentration at different levels from input supply to trading and processing reinforces questions which have been raised about the nature and effectiveness of competition in agricultural markets (Vilakazi and Roberts, 2019; Swinnen, 2020).² Recent analyses and available data have pointed to markets not working well for smaller farmers in Africa, who receive poor prices, in part due to high volatility (Sitko et al., 2018; Bell et al. 2020; Ochieng et al, 2019; Baulch et al., 2021; Bonilla Cedrez et al., 2020).

¹ See FAOSTAT.

² Traders appear to benefit from poor information, and conversely make lower margins when information improves (see Djanian and Ferreira, 2020).

At the same time, it has been observed that food prices in African cities are generally higher than in developing countries in other regions of the world (Nakamura et al., 2018; Allen, 2017). We therefore have a situation where markets appear to be working badly for small and medium producers, who may be receiving very low and volatile prices, and also for consumers who are paying high prices.

In addition, agricultural markets are clearly massively impacted by the climate change emergency. The frequency of extreme events such as droughts, heatwaves and floods is increasing (WMO, 2020; IPCC, 2021). There is an important link with competition as such shocks can be exploited by firms with market power, exacerbating the negative impact while, conversely, competitive and efficient regional markets can dampen the effect of these shocks through trade flows from other parts of the region where there is good weather.

The paper uses data that has been collated from various sources including direct from market participants and organisations in Kenya, Malawi, Tanzania, Uganda, Zambia and Zimbabwe. This involved the development of an app for crowd-sourcing information.³ It followed a review of data sources⁴ which highlighted gaps as well as concerns with the quality of the data (Bell et al. 2020, and Appendix Table A1). These concerns in themselves are a strong motivation for the African Market Observatory initiative.

The paper proceeds as follows. Section 2 provides an overview of the concerns about agri-food markets with reference to recent literature and gives an introduction to developments in maize and soybean markets including the latest available data on production and trade. Section 3 explains what would be expected in competitive markets. Sections 4, 5, 6 and 7 analyse maize, soybean, rice and fertilizer markets, respectively, drawing on the ongoing data gathering reported in monthly price trackers (available [here](#)). Section 8 consider consumer prices for maize meal, against maize prices and cross-country comparisons. Section 9 assesses competition and market structure in more detail, including considering key mergers. Sections 10, 11 and 12 set out the implications for policy and advocacy, enforcement and merger review. Section 13 concludes and draws recommendations.

³ This is the POKET app.

⁴ These include the Regional Agricultural Trade Intelligence Network (RATIN); the Food and Agricultural Organization's Corporate Statistical Database (FAOSTAT); the World Food Programme's Vulnerability Analysis and Mapping database (VAM); the International Food Policy Research Institute Malawi Strategy Support Programme; the Agricultural Commodity Exchange for Africa; and ministries of agriculture and national statistics institutions.

2. Overview of grain markets

2.1. Agri-food markets need to work better for smaller farmers and producers, and market information is essential

Smaller farmers and small and medium sized enterprises (SMEs) play an important role in food production, processing and retail across ESA (Demmler, 2020; Diao et al. 2021). Small and medium farmers have been growing production while, at the same time, there has been an expansion of major traders across the region (Nuhu et al, 2021; Jayne et al 2019; Sitko et al. 2018). These traders could provide better pricing information and deepen markets for market participants, reducing price variations, however, there are also concerns about the market power of these businesses (Sitko and Chisanga, 2017), meaning that the focus of the AMO is particularly timely. There have also been initiatives to make markets work better such as setting-up commodity exchanges in different countries and there are important interventions relating to infrastructure, transport and logistics.

High levels of concentration in trading and poor storage alternatives can mean that small farmers have to sell their harvest at low prices. Powerful traders can then on-sell at much higher prices with big profit margins to buyers including small agro-processors. There are concerns about high levels of concentration and vertical integration in trading and agro-processing, mean a few large firms with market power control most levels of value chains (Paremoer 2021). High barriers to entry can limit the contestation and participation of new entrants and SMEs in agriculture and agro-processing value chains (das Nair & Landani, 2020).

Assessing the market outcomes and the different factors which explain them requires data and information on the different levels of the value chains and careful assessment at a country and at a regional level.⁵ The factors which have been identified in recent studies include:

- Pronounced seasonal variations associated with poor infrastructure and lack of competition in transport and storage, which increase with remoteness. This means that farmers have poor alternatives to selling soon after harvest, causing prices to drop sharply, while prices increase to a peak just before harvest (Baulch et al., 2021; Brenton et al., 2014; Aggarwal et al., 2018).
- Poor market price information inhibits the assessment of, and response to, market developments, exacerbating variations (Pierre and Kaminski, 2019).
- Market power and concentration at different levels including in transport and trading (Bonilla Cedrez et al 2020).
- Short-term government maize trade bans may explain substantial geographic price variations, and greater seasonal price variations, in ESA. These bans can act to suppress farmer prices (Sitko et al, 2017; Koo et al., 2021).

⁵ For example, Bonilla Cedrez et al. (2020) use three different data sources for prices of maize, millet, rice and sorghum, imputing retail prices where only wholesale prices are reported, and inferring maize prices where the prices of other grains are reported and not maize, in order to build a bigger maize price data set.

- The effects of climate change and extreme weather.

The analysis of the monthly data from the observatory enables us to tease out how these effects have impacted on prices within and across countries.

The comparison across the different commodities also raises important questions, such as why very different transport and trading margins appear to exist for maize and soybeans for the same pairs of supply and demand locations? And, why prices have changed substantially in very short periods of time for some commodities in some locations and not in others? We are also able to compare consumer prices to prices at the producer/wholesale level to consider the price transmission along the value chain to impact on consumers.

While transport infrastructural development is important in reducing the costs faced by smaller traders, we note that the more prominent concern in the region relates to competition and market power in transport, resulting in transport rates to smaller traders well above efficient rates. Issues in transport in the region, however, only in part explain the varying prices of maize and soybean, over space and time.

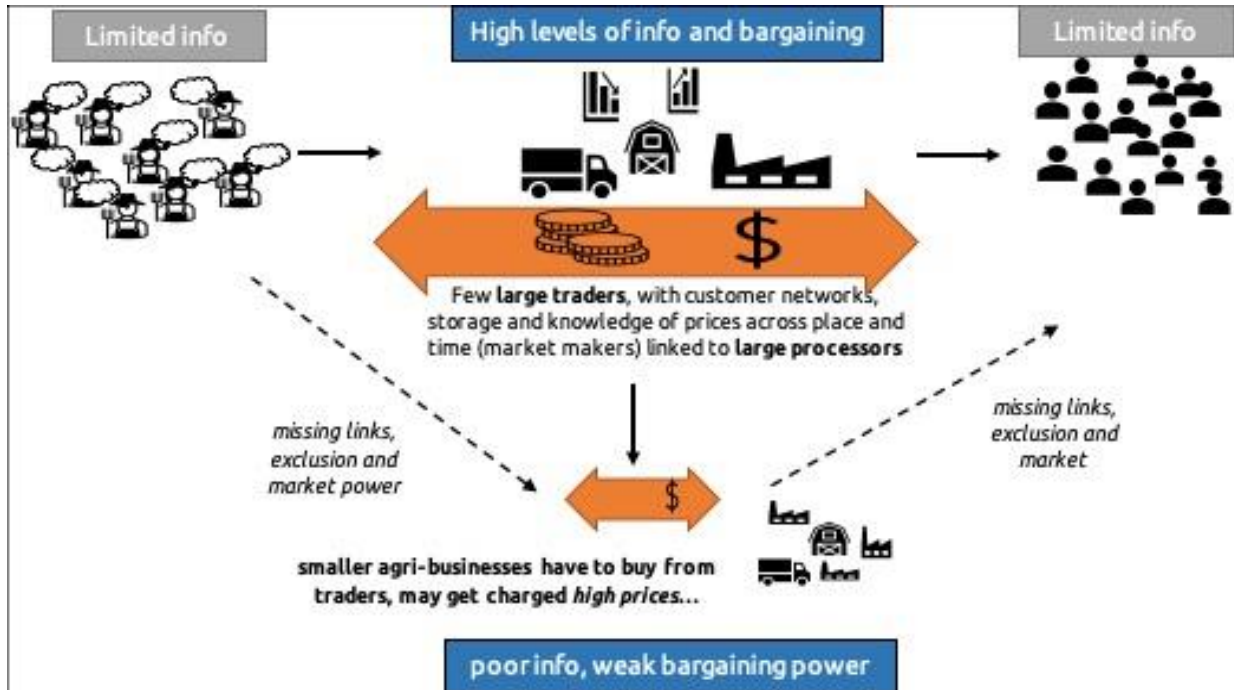
Price differences between locations are often substantially more than would be justified by transport costs. The margins points to possible large arbitrage profits, as well as raising concerns about the nature of the market power which lies behind the differences observed. This can mean a double blow from the large margins between suppliers and buyers, as farmers get very low prices and buyers, including small agro-businesses such as processors and poultry producers, are charged very high prices (Figure 1). Smaller traders and processors are effectively undermined and excluded in such circumstances.

There are also major changes in prices over short periods of time which implies that parties which are able to control stocks can make big profit margins.

Transparency can improve the bargaining power of smaller farmers and has the potential to reduce the large trader margins. If accompanied by better options for storage and transport, it can allow farmers to plan based on any reasonable expectation of the prices they may be paid in future. However, such measures rely on markets being competitive.

Figure 1: Impact of price information scarcity on small players in agriculture





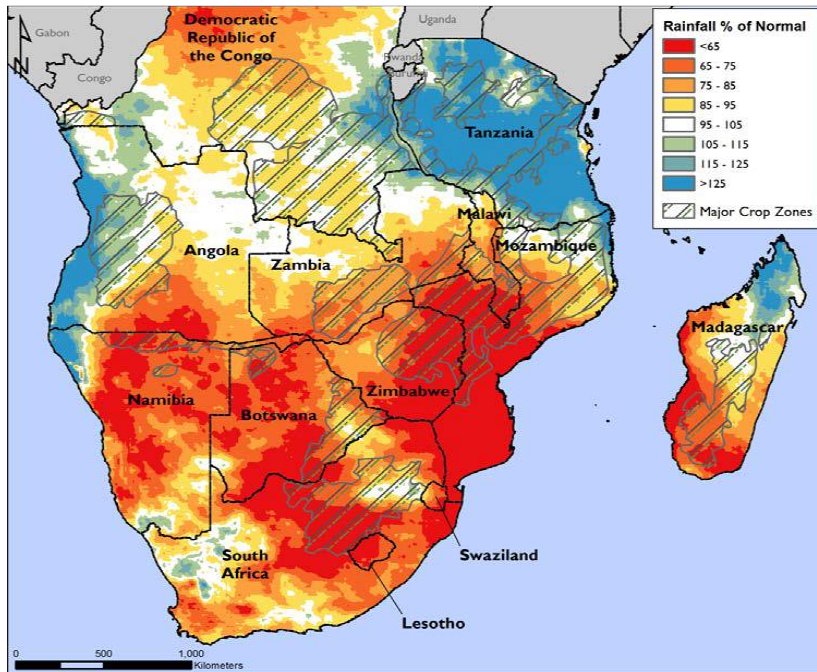
Source: authors

2.2 Climate change and weather patterns

Climate change compounds the challenges facing farmers and producers, especially smaller farmers. In the short term, there is more frequent extreme weather such as droughts and floods. Southern Africa is identified as a climate change hotspot with the predicted temperature increases predicted to be double the global average (IPCC, 2021; Engelbrecht and Monteiro, 2021). While the south of the region will also become progressively dryer, the central parts of ESA will continue to have good average rainfall. Africa in general is particularly vulnerable to climate change impacts as the continent largely depends on rainfed agriculture and has little investment in water management and irrigation.

The El Niño Southern Oscillation (ENSO) is one of the most important weather phenomena which is characterized by three states - “El Niño”, “La Niña” or “neutral”. El Niño is a warming of the central to eastern tropical Pacific Ocean, with drought in southern Africa whilst inducing heavy rainfall and floods in eastern Africa. The 1982, 1997 and 2015 El Niño were identified as ‘super’, breaking new average temperature records and triggered catastrophic natural disasters including severe drought in Southern Africa (Rao & Ren, 2017; see Figure 2 for 2015/16). These are expected to be more frequent.

Figure 2. Weather conditions in 2015/16 in southern Africa

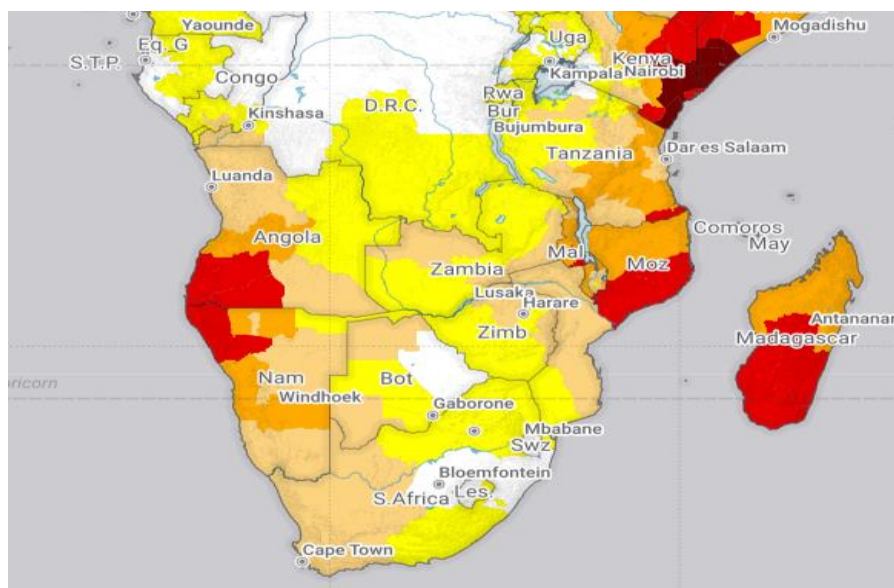


Source: FEWS NET/USGS CHIRPS

La Niña is the opposite, with cooling of the central to eastern tropical Pacific Ocean, and countries such as Brazil and Argentina getting drier whilst southern Africa has normal to above normal rainfall and generally 'good' weather. A La Niña pattern led to Brazil experiencing the worst drought in a century in 2021, while there has been extreme weather in the USA and Canada with heatwaves, tornadoes and wildfires. International prices of soybeans and maize have risen sharply, even while there are bumper harvests in some parts of the ESA region.

The weather experienced over 2020/21, and which is expected to continue into 2022 under the La Niña conditions, has meant poor rains in areas such as the north and east of Kenya even while there are good conditions in west Tanzania and Zambia (Figure 3).

Figure 3. Global Gro Drought Index for the ESA region as at 30 November 2021



Source: Global Gro Drought Index, Gro Intelligence

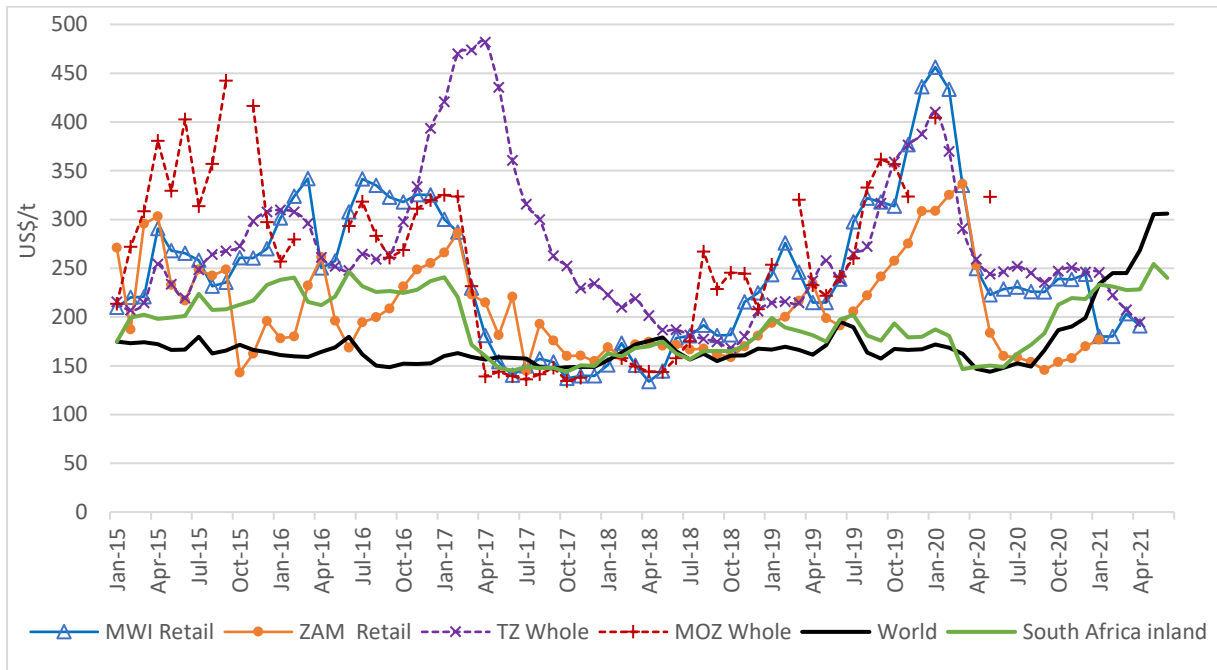
Note: The Gro Drought Index (GDI) provides measurements of droughts worldwide. The GDI measures drought severity on a scale from "0" (yellow) no drought, to "5" (red) or severe drought.

Improved intra-regional trade through broader and deeper markets are therefore an essential part in mitigating the risks associated with climate change as when one part of the region experiences poor weather impacting negatively on production, other areas continue to have good conditions for production. Realising the potential gains from better-working agricultural markets also entails supporting smaller farmers and producers, and enabling climate-smart agriculture that adapts to the effects of climate change and severe weather patterns (AGRA, 2021).

Regional markets need to be competitive and effective otherwise those with market power can take advantage of climate shocks to drive up prices rather than markets playing the role of dampening the effects of shocks. Competition is essential along with intra-regional trade and investment in regional food production systems and markets to meet the climate challenges. Across the region investments are required in water management, irrigation and storage facilities to support more resilient production systems. This investment can generate economic growth while helping to deliver on the Sustainable Development Goals (Brahmbhatt et al., 2016).

The impacts of the rapidly developing climate emergency and poorly functioning markets can already be seen in the prices of key commodities, including maize, soybeans and rice, both internationally and regionally. Maize prices jumped in some countries in 2015/16 such as Malawi and Mozambique and Malawi (Figure 4). In 2017 high prices in Tanzania occurred when there were low prices in neighbours, meaning trade in more integrated regional markets would have mitigated the impact. In 2019 extreme weather events (such as cyclones in Mozambique), poor rainfall and concerns about drought saw prices spike again. Increased volatility and higher levels of uncertainty can also be magnified by speculation on crop production. Countering this requires appropriate measures such as buffer stocks, and better storage and logistics to enable regional trade between areas affected differently. These relate to adaptation requirements.

Figure 4. Maize prices



Sources: WFP's Vulnerability Analysis & Mapping (VAM); SAGIS; World Bank

Notes: Prices are a combination of retail and wholesale data, as indicated in the legend, and thus not comparable across countries, although giving an indication of changes over time.

Major changes are also required globally to mitigate the effects of agriculture and food on the climate given that food and agriculture is responsible for around 33% of greenhouse gas emissions, although the contribution of African countries to this is negligible (Crippa et al. 2021). Deforestation and conversion of tropical grassland and savannahs in countries such as Brazil and Argentina for planting soybeans is one of the drivers of emissions which is being targeted (De Maria et al, 2020). These activities lead to the destruction of natural habitats and biodiversity loss as well as rainfall changes (Ellwanger et al., 2020). In response, the EU is bringing in a deforestation regulation applying to products including soybeans and derivatives,⁶ while supermarkets and food processors are addressing traceability for where they source their soybeans. Pressures for similar changes will be felt in African countries.

We now provide an overview of maize and soybean markets which have been the main focus of the AMO before assessing the recent pricing developments and concentration in more detail in subsequent sections.

2.3 Maize overview

Maize is the third largest planted commodity in the world, following wheat and rice, however, in many African countries it is the leading staple food. Internationally, maize demand is driven by animal feed, while maize is predominantly grown for human consumption in Africa. As incomes increase in African countries the demand for meat will rise further meaning growing demand for animal feed. Around 13% of all maize globally is exported with the biggest producer and exporter

⁶https://ec.europa.eu/environment/publications/proposal-regulation-deforestation-free-products_en

being the USA, reflected in the USA Gulf of Mexico price being an international benchmark. The second biggest producer, China, is also the biggest importer given the size of its demand, and it runs a persistent trade deficit. The USA accounted for 31% of the global production of maize in 2020, followed by China and Brazil which made up 22% and 9% respectively. Growing demand in Asia is a key driver of markets, while extreme weather events in the main producers have huge impacts, as we have seen in the past 18 months as international prices have doubled.

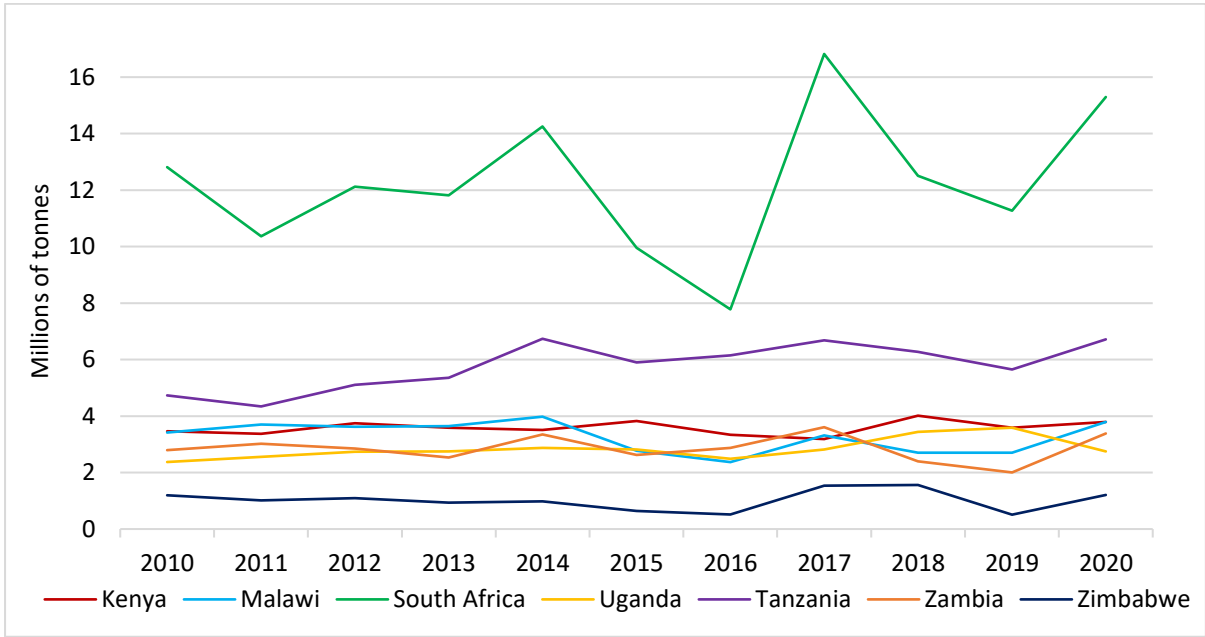
The exceptional adaptability of maize allows it to be grown in various geographic locations with a diversity of soil and climates. The global market also recognizes maize as the queen of cereal grains as it has the highest genetic yield potential among all other cereal grains (Dass et al, 2012). The maize market can be segmented based on type, colour, end use, nature and region. In terms of colour, the market is segmented into either yellow or white maize, with yellow maize constituting majority of production, as it is the most geographically adaptable of the two and is predominantly used for animal feed. Maize also has a wide range of other industrial applications in food and beverage, pharmaceutical, personal care and cosmetics, chemical industries, as well as for biofuels.

Maize is a major agricultural crop across ESA and is produced by smaller farmers in most of the countries, across large areas of land. Since 1970, maize production in the ESA region has almost quadrupled reaching over 48 million tons harvested in 2018 (Bell et al, 2020). South Africa is by far the largest producer and a substantial exporter, apart from in 2016 as a result of the severe drought (Figures 5 and 6). Zambia and Uganda are net exporters, mainly to the region (Figures 6 and 7). Tanzania is the second largest producer, however, exports are relatively small given the size of local demand. The third largest regional producer, Kenya, is a net importer due to the size of its demand. Zimbabwe's production has faltered, with some recovery after 2016.

Maize production in South Africa for 2020 improved to over 15 million tonnes, which is an increase of over 35% from 2019. After relatively poor rains in 2019, Tanzania, Malawi and Zambia also saw an increase in production in 2020. This was consistent with the lower prices that were observed in 2020 and 2021. The drought in Zimbabwe in 2019 had resulted in significantly lower maize production.

Figure 5. Regional maize production

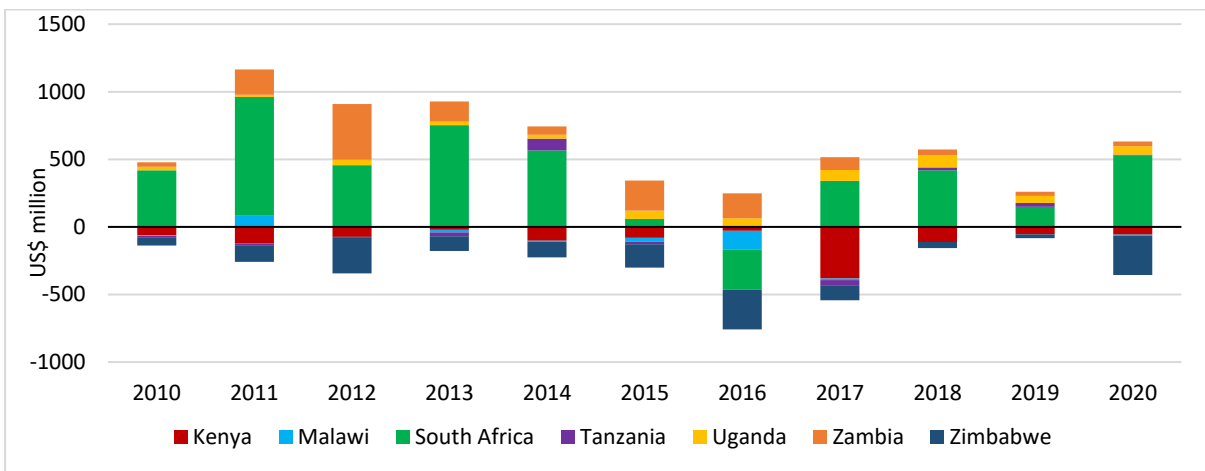




Source: FAOSTAT2017 - 2020 Malawi data is from the Ministry of Trade in Malawi

The supply and demand balances have meant that South Africa’s benchmark price (set inland at Randfontein close to Johannesburg) is important for the region. It has generally been based on what can be earned in international export markets, given the substantial surplus in that country (Figure 6). In other countries, prices have varied substantially, due to weather variations, seasonal factors, government interventions and with differences which require further explanation. For example, in Kenya the market clearing prices are based on imports but have been far above what would be reasonably expected given transport costs.

Figure 6. Regional maize net exports



Source: Trade Map

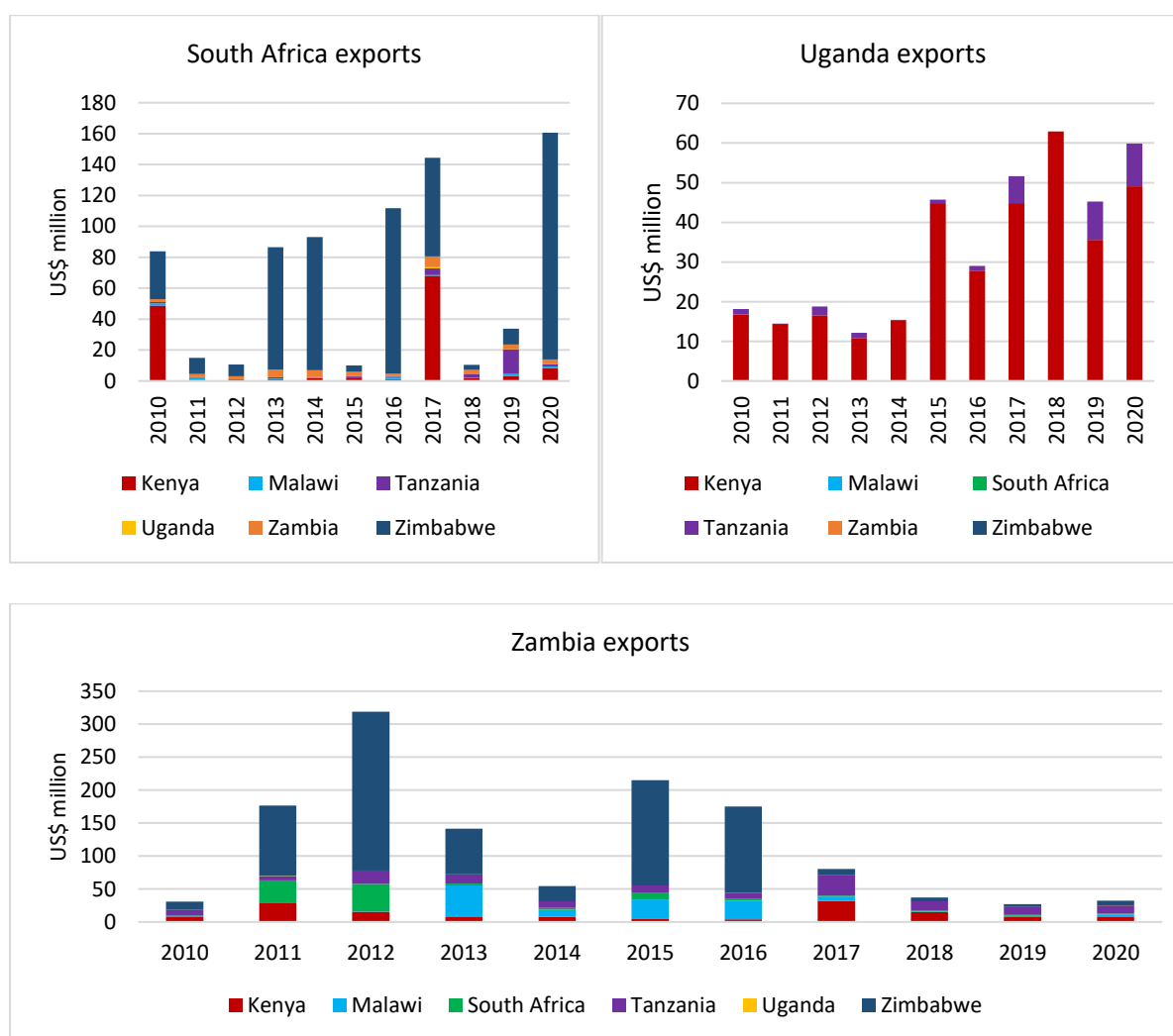
The 2015/16 drought in Southern Africa points to major impacts which need to be anticipated for the next El Niño episode. South Africa and Malawi recorded large trade deficits, to add to that of Zimbabwe. And, in 2017, Kenya ran a substantial deficit. Prices increased massively in some



countries (Figure 4). The lower production once again in 2018/19 in some countries, given relatively dry conditions and extreme weather events such as cyclones impacting in Mozambique and Malawi, saw a spike in prices in some countries as supply constraints were anticipated. However, supplies remained relatively good in the region as a whole.

The exports from Zambia and Uganda have been almost entirely to Zimbabwe and Kenya respectively (Figure 7). Kenya has also imported from Tanzania and South Africa, while Zimbabwe imported from South Africa in some years, notably in 2020. Aside from these, regional trade plays a relatively small role in maize markets. This partly reflects government interventions including temporary trade restrictions, market regulation and pricing, as well as concerns about ensuring local food security.

Figure 7. Maize exports from the net exporters to countries in the region



Source: Trade Map

2.4. Soybean overview

Soybeans are considered the ‘green gold’ as the key source of protein in much of animal feed around the world. The crop is grown in tropical and subtropical climates and is one of the most valuable



crops in the world, not only as an oilseed crop and feed for livestock and aquaculture but also as a good source of protein in the human diet and as a biofuel. The global soybean market is therefore driven by demand for the derivative products, through the crushing industry, where soy meal and soy oil are extracted. By far the most important driver of soybean demand is the animal feed industry which consumes around 80% of global soybean production. A large proportion, more than 30% of soybean demand, is met by international trade (which would be an even higher proportion if we took trade in derivative products, such as animal feed, into account).

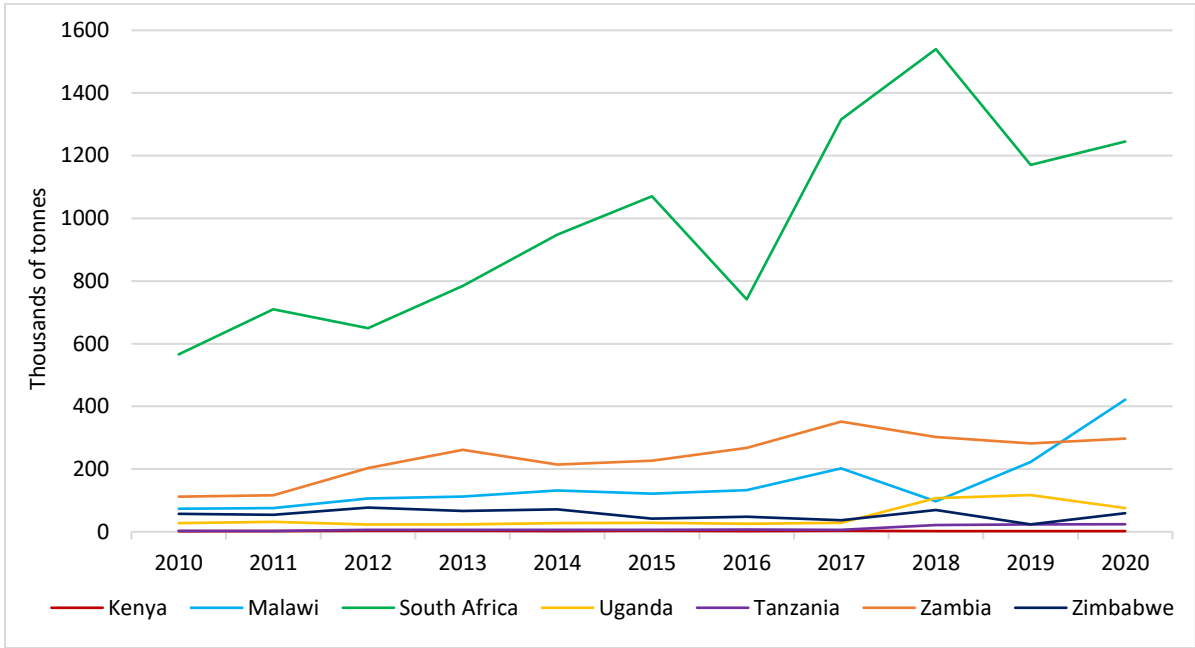
Brazil overtook the USA in 2019 as the world's largest producer, although 2021 production was impacted by severe drought. Questions are also being raised about the extent to which Brazil's expanded production derives from deforestation. Both Brazil and the USA are large net exporters, however, Brazil is by far the largest, with supplies mainly going to meet the huge demand in China for animal feed for pork, poultry and fish farming, among others. Argentina is also a major producer and exporter. China's demand for soybeans has driven increased prices on the demand side, while drought in Brazil impacting supply has seen huge increases in the international price for soybeans by more than 50% to over US\$600/t in mid-2021.

Soybean production in the ESA region is low, apart from in South Africa, Zambia and more recently Malawi (Figure 8). South Africa and Zambia recorded strong growth in soybean production from 2010-19. However, South Africa still remains in soybean deficit, as does the region as a whole, and therefore relies on imports from international markets. Zambian production has also grown over the decade from a very low base and, given its demand (at around 200-250 thousand tonnes per annum), it has moved from being a net importer to be a net exporter (Bell et al, 2020). Production in Malawi grew very strongly in 2019 and 2020, to over 400th tonnes, quadrupling over two years and surpassing the levels of production which have been recorded in Zambia.

Zimbabwe has recovered from the impact of the 2019 drought and has increased its production by over 150% in 2020 to 60th tonnes. Uganda, however, saw a decline in production of 36% to 75th tonnes. Production conditions for soybeans are also very good in the south-west of Tanzania and the government's strategy had targeted output levels nationally of two million tonnes per annum, however, production levels have not taken off and remained below 50th tonnes per annum. The demand is from animal feed required by poultry and fish farmers who are generally located close to the major cities.

Figure 8. Regional soybean production

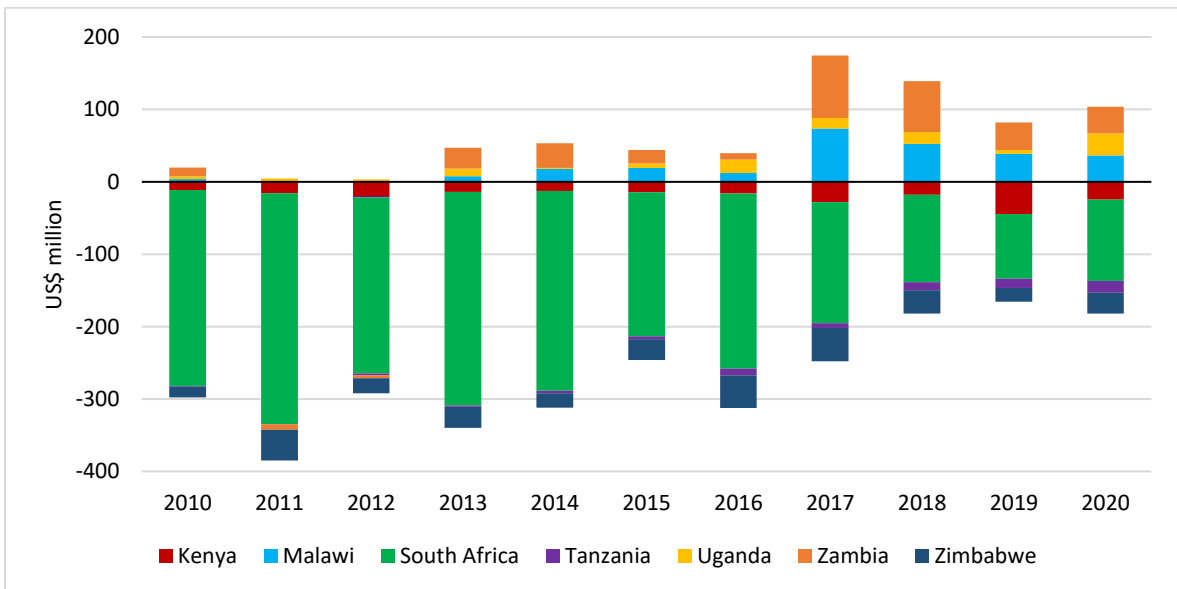




Source: FAOSTAT. 2017 - 2020 Malawi data is from the Ministry of Trade in Malawi

Notwithstanding good potential for soybean production, the ESA region overall is a substantial net importer. South Africa continues to be a net importer, especially when derivative products are included, as are Kenya, Tanzania and Zimbabwe, while Zambia, Malawi and Uganda are net exporters (mainly to neighbouring countries) (Figures 9 and 10).

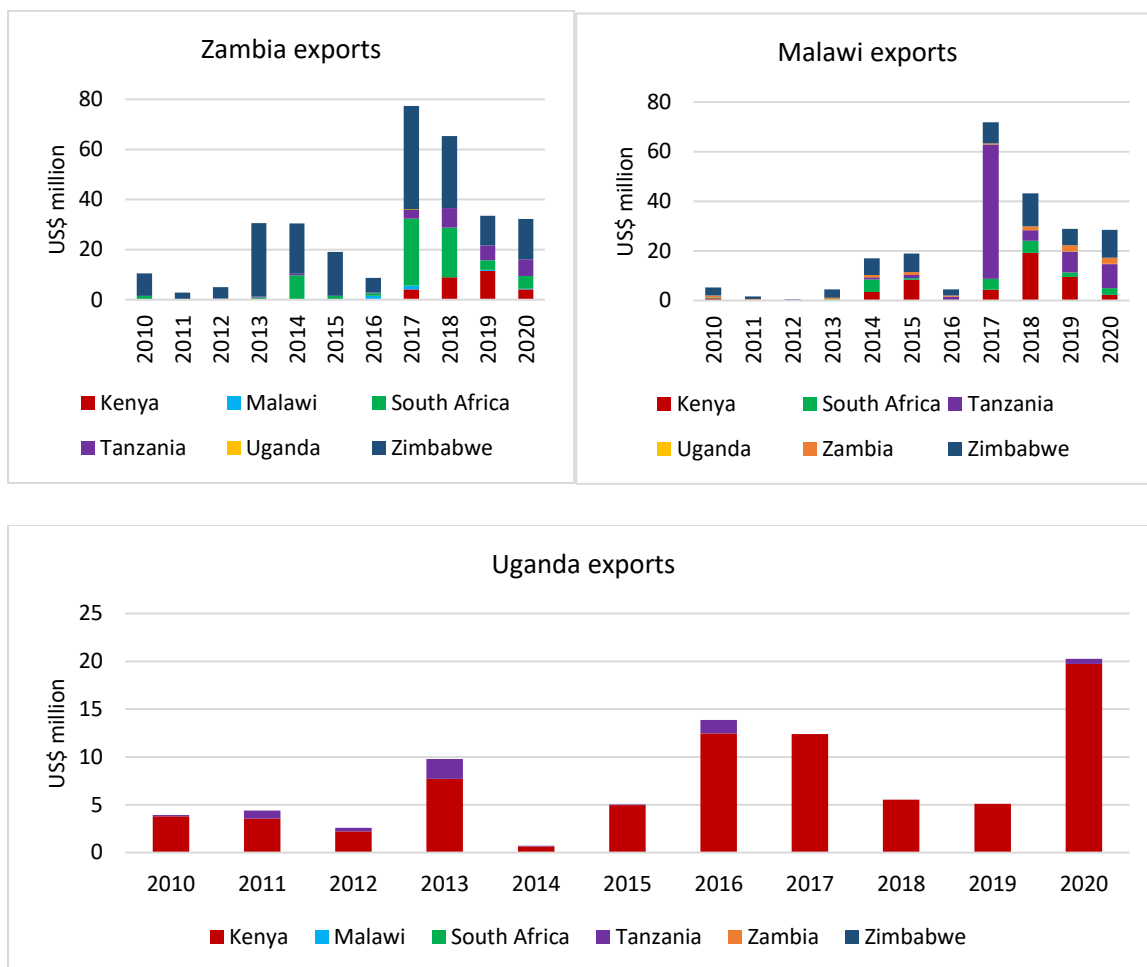
Figure 9. Regional soybean & oilcake net exports



Source: Trade Map

Figure 10. Soybean & oilcake exports from the net exporters to the region





Source: Trade Map

Uganda exports to Kenya are mainly made up of oilcake (accounting for 81% of the 2020 exports). The data on Kenya's soybean imports for the period 2010-2020 indicates an overall decline in the total imports after 2012 until 2018. In 2019 & 2020, the trade data for Kenya report imports from Ukraine.

Demand depends on commercial meat and dairy production, and the soybean price is a key factor in the competitiveness of local poultry production (Ncube, 2018). Continued urbanization and rising incomes mean demand for poultry, as well as other animal and fish farming drives demand growth. For example, South Africa imports around 20% of its poultry requirements which represents derived demand for animal feed, in addition to around 500th tonnes of oilcake in most years.

3. Competitive market expectations

We set out prices which would be expected for commodities traded in competitive cross-border markets. This involves considering the market clearing sources of supply for the main centres of demand. In effect, this enables calculations of import and export parity prices for different locations. Transport and related costs are necessary for this, as well as storage facilities for being able to supply throughout the year.

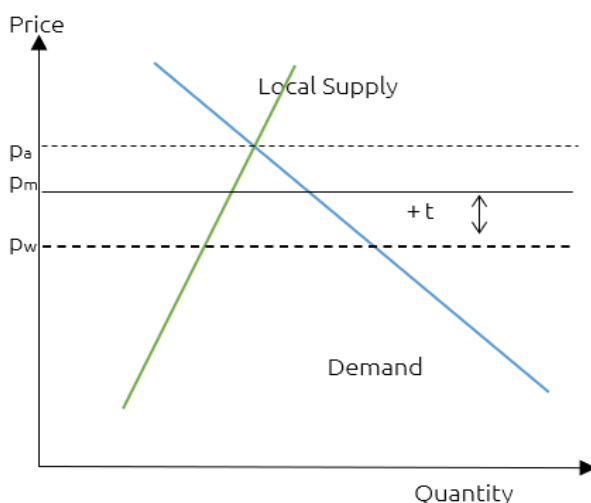
In competitive markets for homogenous commodities we can think of prices ranging between boundaries set by alternative sources of supply, where there is a local deficit, or by alternative export market opportunities where there is a surplus which set the willingness to accept for prices by local suppliers. Where the markets we are considering are small relative to international markets, the world price represents elastic supply and demand at a price p_w , which can be reflected as a horizontal line if perfectly elastic.⁷

If there was no trade then countries with poor producing conditions would have limited supply and very high prices, while countries with good producing conditions would have high supply and very low prices. These are given by p_a in Figure 11A and 11B below. With trade it means imports can relax the supply constraints, and exports can provide opportunities for suppliers.

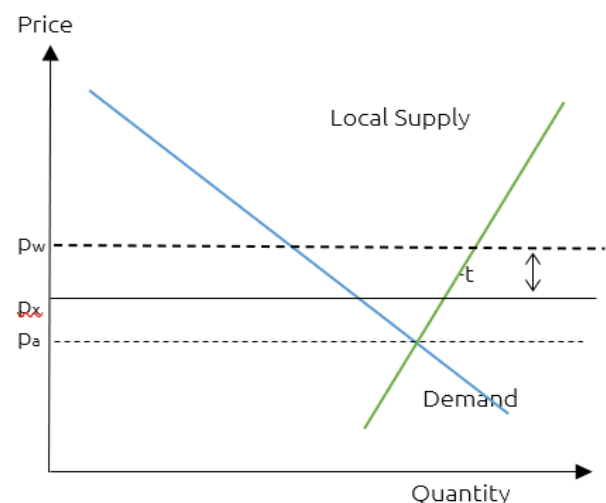
This means that in net importing countries (Figure 11A) market prices p_m should not rise higher than the international price (p_w) plus the transport and related costs to import ($+t$). In net exporting countries (Figure 11B), suppliers will be willing to accept prices which are equivalent to the international market price less the transport costs to get it to market ($-t$).

Figure 11. import and export parity prices

11A. Low supply relative to demand, met by imports



11B. High supply relative to demand, exports



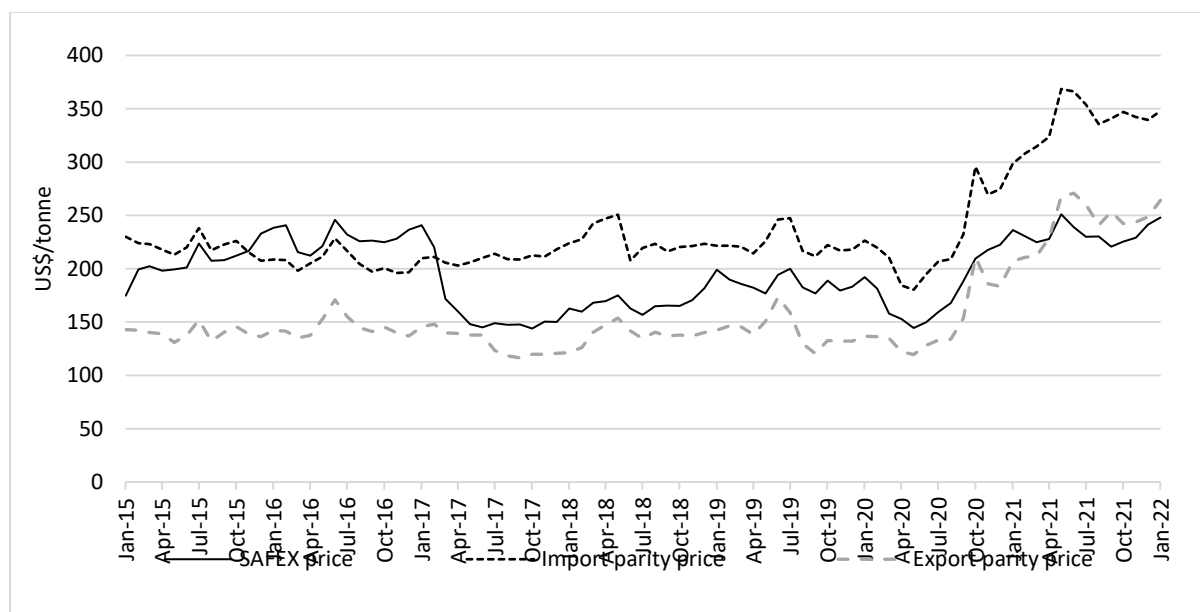
⁷ South Africa is also a relatively large economy in the region which has both production and substantial demand for economies in the southern African region.

In other words, the prices should not be higher than the import parity price (international prices plus transport costs) or lower than the export parity price (international prices less transport costs). Competition in trading and supply across borders drives these outcomes – offering customers alternatives in Figure 11A and offering suppliers export markets in Figure 11B.

The gains from regional competition are the gains from trade. In Figure 11A the country does not have to expend resources to supply something it does not have a good capacity to produce and can instead focus on other products and import to meet demand. In Figure 11B the country is able to benefit from its good production potential by expanding supply to meet demand in international markets in addition to local demand with the better prices benefiting producers and flowing through into the economy.

This is illustrated in movements in South African exchange maize prices (on SAFEX), as also reflected in other assessments (Chabane et al. 2008). South African is a net exporter in almost all years and, as such, prices tend to export parity, which is the world price less the transport costs to ship it from the main inland producing area (Figure 12). In 2015/16 the historic drought conditions meant the price increased up to and above the import parity benchmark as there were constraints in sourcing the imports required. In 2019 poor rainfall again saw prices increase above the export parity prices as while South African production was sufficient for local needs, demand from neighbouring countries also had to be factored in. In 2021, very good harvests in South Africa meant prices even fell just below higher export prices to international markets. These reflect competitive market dynamics. If prices increased to import parity levels even while there were net exports this would likely reflect market manipulation to constrain local supplies, such as by a traders' cartel. This manipulation did occur in 2002 when speculation on the part of large traders created an artificial shortage (Chabane et al. 2008). Only because there was a lack of competition given the concentrated nature of the traders in the country was this possible. As there were net exports, competing suppliers should have been willing to sell at a price which is better than the export alternative.

Figure 12. South African exchange (SAFEX) inland (Randfontein) maize prices against inland import parity and export parity benchmarks



Source: SA Grain Information Services

Note: The import and export parity prices are for yellow maize (from quoted USA NO3Y maize, FOB Gulf)

Uncompetitive transport markets could also mean higher transport costs than in a competitive market which would increase the gap between export and import parity prices. This could be because of anti-competitive conduct in transport services such as cartels, or barriers to entry or regulatory restrictions constraining the availability of competing trucking services.

Trade restrictions also impede cross-border competition. While these may have justifications, the objectives could be achieved in different ways and we therefore need to assess what the impact is of undermining competitive regional markets.

To calculate the expected outcomes if markets were competitive and free from restraints, we need to know the supply and demand balances, consider which are the sources of supply for markets to clear and to compute efficient transport costs for important cross-border routes which are at the heart of regional integration and competition.

We set out the basis for our estimates of transport costs in the first paper from a range of studies which assessed actual costs for cross border routes. The costs we calculate are a reasonable estimate of the costs that *efficient traders* incur. This is not unrealistic as there are large businesses with their own integrated transport operations that are not subject to any inflated margins in trucking.⁸

We acknowledge that there are many factors which need to be considered, including border costs and delays, length of trip (as the loading and unloading involves costs which are spread out over longer trips), volumes, and the potential for backhauls. Noting these caveats, recent studies have

⁸ For example, ETG and Bakhresa each have their own trucking fleets.

identified rates as low as US\$0.03/t/km for Lusaka to Johannesburg and US\$0.04/t/km for Blantyre to Johannesburg – these both long journeys benefitting from backhauls (with outward trips priced at roughly double meaning the average rate is around US\$0.05 to US\$0.06) (see Table 1, and Vilakazi and Paelo, 2017; Nsomba et al. 2020). However, they also involve multiple borders where there have been extensive problems noted, *and* do not take into account recent steps to improve transport routes. A rate around US\$0.04/t/km is considered more in line with that expected from **efficient, competitive markets** for road transportation.

Table 1: Indicative cross border trucking rates, US\$ per tonne, per km, for given years

Route	Distance (km)	Katungwe (2015)	Vilakazi & Paelo (2015)	Nsomba et al (2019)
Lilongwe – Beira	944	0.08	0.07	0.06
Beira – Lilongwe	944	0.14	0.14	0.10
Blantyre – Beira	664	0.11	0.11	0.06
Blantyre – Jo’burg	1731			0.04
Jo’burg – Blantyre	1731			0.08
Lusaka – Jo’burg	1576 ⁹		0.04	
Jo’burg – Lusaka	1576 ⁸		0.08	
Harare – Maputo	1286		0.03	
Maputo - Harare	1286		0.05	

The Competition Authority of Kenya conducted a market inquiry in 2019 looking at competition issues in shipping, trucking and haulage in east Africa (CAK, 2019). Similar to Vilakazi and Paelo (2017) and Nsomba et al. (2020), the CAK finds that price setting in east Africa is highly dependent on the direction of transport, with specific routes benefitting from backhauls, and rates covering imports being significantly higher than the rates covering exports. The study does not calculate for efficient transport rates and instead reflects the rates which were being charged in 2017 to and from the port of Mombasa and the main east African cities. These reflect rates to Mombasa of US\$0.03-0.04/t/km and rates from Mombasa of US\$0.05-0.08/t/km (Table 2). These are in line with the estimates of the other studies and given all the issues observed relating to high costs being charged by transporters, are in line with using an efficient transport rate at US\$0.04/ per tonne per km.

Table 2: Indicative cross border trucking rates in east Africa, 2017

⁹ This is via Harare. The route via Botswana which is now being more widely used is 1736km and, while being longer, faces lower charges en route. For instance, delays on the Lusaka–Harare route were assessed to potential resulting in an 18 per cent reduction in costs if improved.

Route	Distance (km)	To Mombasa		From Mombasa	
		Rate per truck, US\$	Rate, US\$/t/km	Rate per truck, US\$	Rate, US\$/t/km
Mombasa – Nairobi	481	466	0.04	729	0.06
Mombasa - Kisumu	828	700	0.03	1066	0.05
Mombasa – Eldoret	812	703	0.04	1062	0.05
Mombasa – Kampala	1170	1027	0.04	1760	0.06
Mombasa – Kigali	1682	1700	0.04	3140	0.08

Source: CAK (2019) and authors calculations, for 24t being carried in a 20ft container.

4. Maize markets analysis

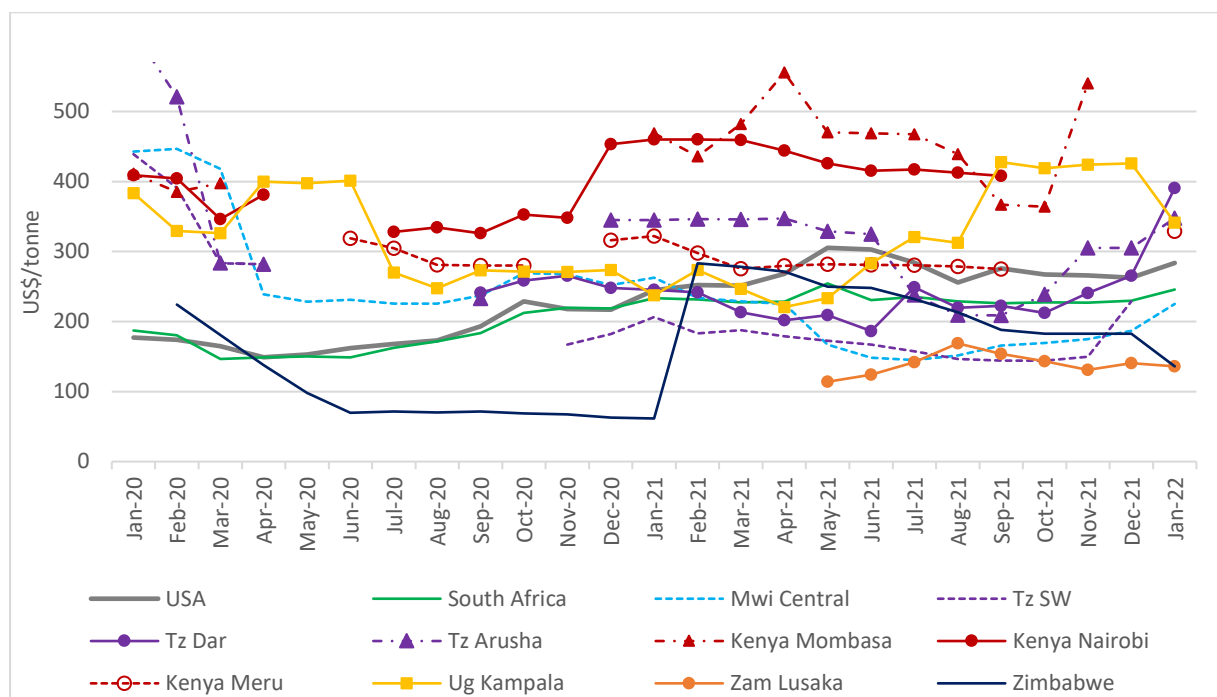
4.1. Tracking prices from the market observatory

In 2021, the most severe drought in a century in Brazil, along with drought in Mexico and extreme weather in the USA, saw international benchmark prices increase sharply. The USA export price doubled from mid-2020 to above US\$300/t in May 2021. In contrast, in the ESA region there have been very good harvests in many countries with the notable exception of Kenya.

Good rains in southern Africa and central eastern Africa and strong production have seen low prices at around US\$140-160/t in Zambia, Malawi and south-west Tanzania, and around US\$220/t in South Africa in 2021 (Figure 13). These reflect different export opportunities and alternatives for farmers. In land-locked countries such as Malawi and Zambia the prices that can be realized for exports are reduced by very high transport costs relative to the value of the commodity. Prices in Zambia, Malawi and south-west Tanzania have therefore been very substantially below international prices from mid-2020, as well as below South African prices.

By comparison, prices in Kenya have been extremely high in 2021, above US\$400/t in Nairobi and Mombasa in almost all months, even while prices in Meru have been reported at below US\$300. Prices in Kampala, Uganda, increased from competitive levels close to US\$200/t in April 2021 to above US\$400/t in September. In Tanzania there have also been big differences within the country, with much higher prices in Arusha in early 2021 and high prices in Dar es Salaam and Arusha later in the year, in comparison with prices in the south-west. The prices in Zimbabwe are set by the government through the Grain Marketing Board and trade bans are in place, with the prices in US\$ varying due to the changes in the parallel exchange rate we have used here to make the conversion from local currency.

Figure 13. Maize producer/wholesale prices in regional and international markets



Source: based on price tracker data from multiple sources

The high prices in Kenya and Uganda appear to reflect drought conditions in north-east Kenya. Prices in Uganda have shown an upward trend since May and had a steep increase in September, breaching the US\$400/t mark, and surpassing the Nairobi and Mombasa prices. Prices in Tanzania also increased in November 2021 to January 2022.

The price levels across local markets and changes over time represent very large differences which are much greater than justified by transport and/or storage costs. While weather patterns and trade restrictions play a role, the differences also point to big margins being exploited by intermediaries, the fact that regional markets are poorly integrated in practice, as well as the challenges of inadequate storage facilities and market information. The price differences within the ESA region, which has good local production conditions, regional transport corridors and international trading companies operating across the countries within regional economic communities (COMESA and EAC), are larger than if we are to look at differences across much of the world.

There have been large differences in prices even between locations within the same country, such as a difference of US\$184/t between Nairobi and Meru in Kenya in March 2021 and a difference of US\$142/t between south west Tanzania and Arusha in November 2021.

In Zimbabwe, the government has set the prices and prohibits all trade outside the approved channels. Zimbabwe experienced a very good harvest in 2021 under favourable weather conditions. The government set a high price of ZWLUS\$32000 in February 2021, with all sales having to be made to the Grain Marketing Board (GMB). This saw the price more than quadruple in local currency terms from the fixed price of ZWLUS\$6958 that was previously set by government. The price for international comparison depends on the exchange rate used. In Figure 15 we use the parallel rate,

with the changes in the maize price in US\$ reflecting the depreciation of the Zimbabwe dollar.¹⁰ At the Reserve Bank rate, the prices would be substantially higher, around US\$355/t in October 2021.

Data from the Market Observatory app confirms the considerable differences within and across countries in the ESA region with smaller producers and agro-processors reporting on the app experiencing even bigger variations in prices than the averages by location reflected in Figure 13. For example, smaller participants in Dar es Salaam reported paying maize prices of US\$473/t in September 2021 and US\$434/t in November 2021, around the levels of Nairobi even while the official sources in Tanzania were reporting lower bulk prices. Price variations have also been reported in some regions in Malawi which vary substantially from month to month.

4.2. Comparison of producer/wholesale maize prices against expectations of competitive markets

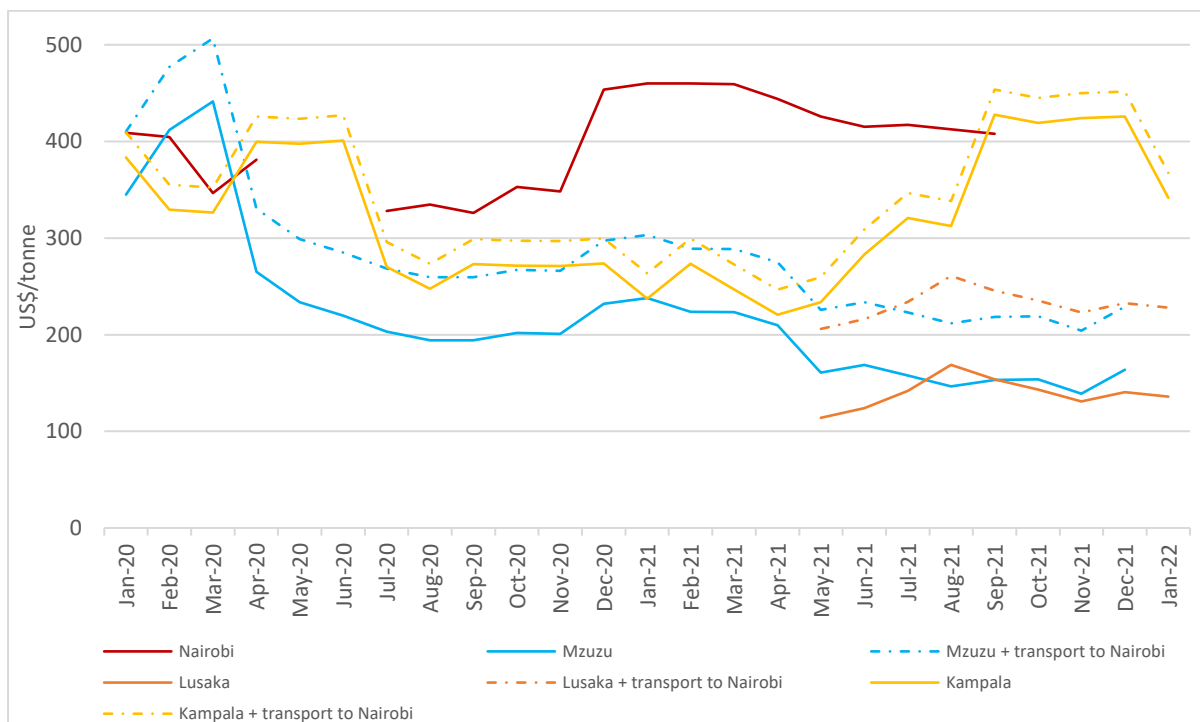
The tracking and analysis of prices for key commodities enabled us to identify concerns in market developments over time and across locations, including across borders. This points to changes relating to seasons, the impacts of market information and the effects of short-term trade restrictions. We are also able to compare consumer prices to prices at the producer/wholesale level to consider the price transmission along the value chain to impact on consumers and consider the cross-country comparisons.

There are clear areas of demand needing to be met by imports from surplus countries and regions. We consider Nairobi and Dar es Salaam prices, as areas of demand, compared to the prices to deliver product under competitive cross-border export trading from different locations where supply has been strong. These include Uganda, Zambia and Malawi. Good rains in southern Africa and central eastern Africa have seen strong production and low prices at around US\$140-160/t in Zambia and Malawi, with prices remaining within this region for much of the 2021 season.

By comparison, Kenya and Uganda have had high prices which appear to reflect drought conditions in north-east Kenya but with higher mark-ups than would be expected. Our assessment shows that the Nairobi prices in the second half of 2020 were well above competitive imports from Uganda, as well as further afield such as Malawi (Figure 14). Nairobi prices then increased substantially in December 2020 with mark-ups of US\$160-200/t or 80% on average being made over competitive market clearing prices from December 2020 to September 2021, compared with estimated delivered prices from Uganda, and then with Malawi and Zambia from June.

Figure 14. Nairobi prices against market clearing supplies from Malawi (Mzuzu), Zambia (Lusaka) and Uganda (Kampala)

¹⁰ Parallel rates as quoted on zimrates.com



Source: calculated from tracker data and efficient transport costs

This was not necessarily due to anti-competitive conduct, however, as there was a restriction imposed on imports by Kenya in November 2020 due to concerns about aflatoxin levels in imported product from Uganda and Tanzania.¹¹ This restriction, while clearly having a rationale,¹² did also potentially give greater market power to local traders. We note that Nairobi prices were marked-up above prices for producing areas in Kenya such as Meru (Figure 13), as well as remaining over US\$400/t well after the aflatoxin restriction ended around March 2021. This is consistent with other studies which have found high trader margins in Kenya. Bergquist and Dinerstein (2020) find very large trader margins which appear consistent with joint profit maximization (coordination) at the trader level and median mark-ups of 39%. This may also be due to charges being imposed within Kenya at the county level.

The ending of the Kenyan restrictions in March 2021 led to prices in Uganda increasing to the levels in Nairobi. These are however, almost three times the levels in Malawi and Zambia and far in excess of the price of maize exported by these countries and landed in Nairobi (Figure 14). Kenya has often had restrictions on imports from these countries outside the EAC, notwithstanding that they are members of COMESA. Kenya also has restrictions on imports of GM maize, apart from when this was lifted in emergencies such as in the 2011 drought.¹³

¹¹ There had been high reported aflatoxin levels in imports. Aflatoxin is a poisonous compound produced by moulds that grow on cereals and nuts in warm and humid conditions, either before or after harvest.

¹² It was also imposed unilaterally without going through the EAC forums. The ban was reimposed again in March 2021, although lifted shortly after subject to strict conditions being met. <https://theconversation.com/why-maize-is-causing-trade-tensions-between-kenya-and-its-neighbours-156797>

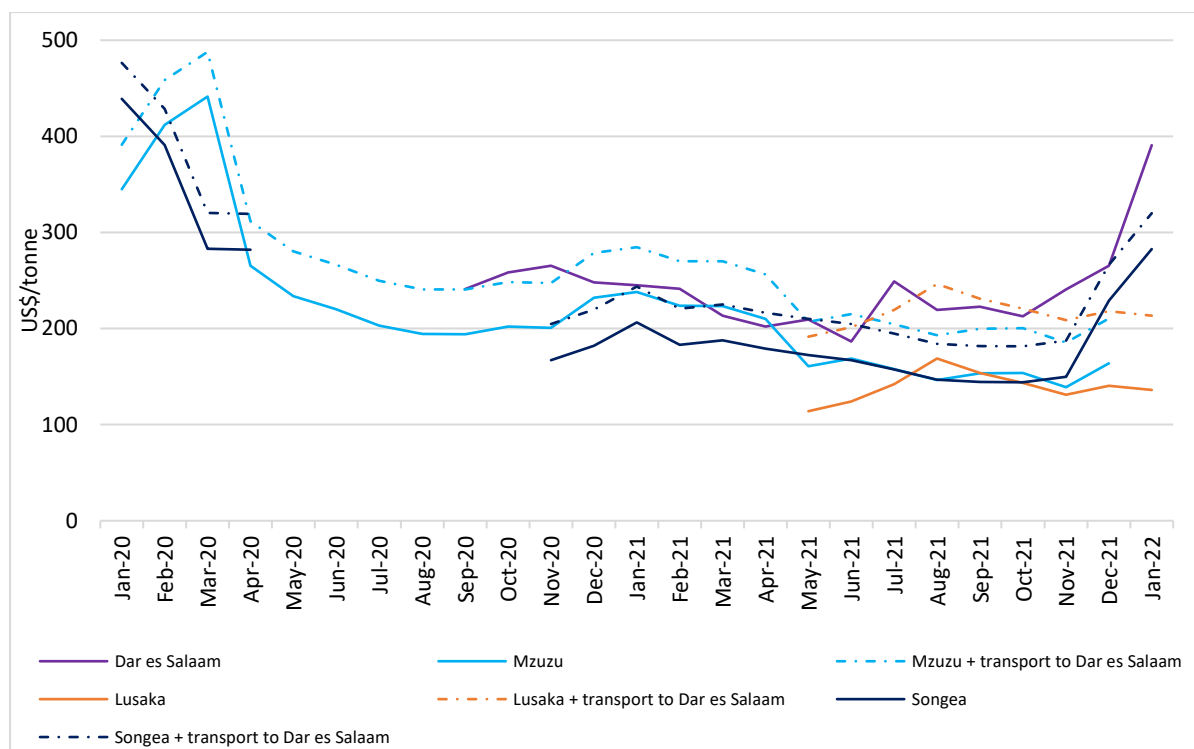
¹³ <http://cga.co.ke/2019/07/29/importation-maize-in-kenya/>

There have been a number of studies which have identified high transport costs and trader margins in Kenya, as well as across Africa. It is important to highlight, however, that large multinational traders and milling companies at the regional level have their own trucking operations and will not be subject to the same mark-ups as smaller market participants procuring these services. We have also considered the transport costs as assessed by the CAK’s 2019 study.

The contrast of Nairobi prices with prices in Dar es Salaam is striking (Figure 13). The Dar es Salaam prices are in line with competitive imports from inside Tanzania, from Songea, including efficient transport costs, as well as with imports from Zambia and Malawi (Figure 15). This is notwithstanding reports of transport issues within Tanzania.

Prices in Tanzania, however, increased from November 2021, from US\$120/t to US\$229/t in south-west Tanzania and from US\$241/t to US\$265/t in Dar es Salaam; both meeting Arusha prices. Climbing prices in Tanzania have been reported to be because of poor rains in the northern regions of the country, with areas such as Arusha and Kilimanjaro being affected.¹⁴

Figure 15. Dar es Salaam prices against market clearing supplies from Malawi (Mzuzu), Zambia (Lusaka) and Songea (Tanzania)



Source: calculated from tracker data and efficient transport costs

There is extensive intervention by governments in maize markets given its importance as a staple food, as well as its importance to small-scale farmers as a crop (see section 9 below). This means that the maize price is inevitably politicised, as interest groups lobby for support. However, at the same time, the demand and supply conditions mean trade is necessary and important to meet demand and that whether regional markets are competitive is an important consideration. A lack of

¹⁴ <https://www.theeastafrican.co.ke/tea/business/drought-hits-maize-supply-prices-in-dar-3687278>



competition means firms can exploit weather related shocks to greatly exacerbate price shifts and earn excessive margins.

The evidence from the market observatory points to substantial concerns regarding:

- Role of traders
- Impacts of trade restrictions
- Transport costs in and across some countries, notably routes to Nairobi

5. Soybean markets analysis

5.1. Tracking prices from the market observatory

The historic drought conditions in Brazil and USA meant international soybean prices increased in 2021 to levels around 50% higher than those prevailing over the previous five years. This is driving higher food prices around the world through the linkages to animal feed and meat prices, as well as vegetable oil.

In ESA, there has been improved regional production in countries such as Zambia, Malawi, Uganda and South Africa, however, there have been huge differences in prices over time and across geographies which raise major concerns. Data on soybean producer prices is less available than for maize and hence we do not have as complete comparisons of what would be expected in competitive regional markets, especially in 2020 before the price tracking, to compare to the actual outcomes. However, the data that we do have indicate much larger excess mark-ups at the trader level and much higher concentration in soybean trading, associated with concentration in processing.

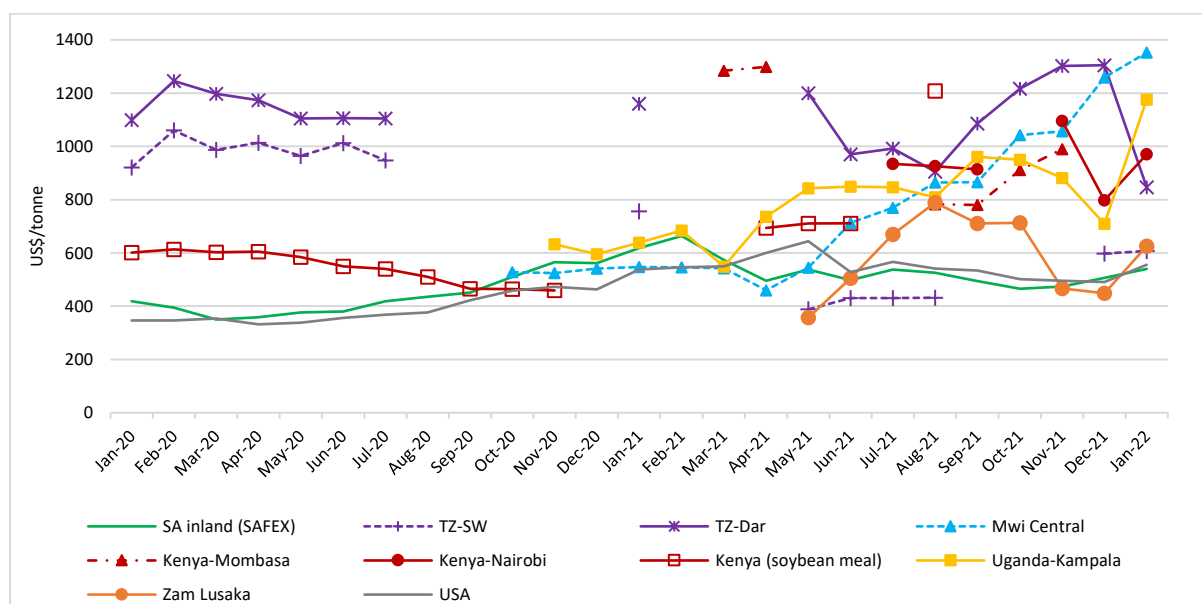
The Observatory highlights that prices to farmers depend on the intermediaries in the trading and processing chain, who also control the price to fish and poultry farmers on the demand-side. The Observatory has been able to provide insight into major price changes over time and differences across ESA which had not been clear before.

There have been extremely large price movements within and across countries in ESA over 2021. Across countries, the good conditions and strong production levels in Malawi and Zambia are consistent with relatively low prices in the first half of 2021 reflecting the net exporter status of these countries (Figure 16). By comparison, prices in Dar es Salaam in Tanzania and Nairobi in Kenya have been extremely high, more than double international prices and, in the case of Dar es Salaam, as much as treble the lowest prices in ESA. Prices in Malawi also increased to over US\$1200/t at the end of 2021 and prices in Uganda in January 2022 jumped to similar levels. It is notable that 2021 prices in south-west Tanzania were much lower than in 2020, at levels close to the lowest levels in Malawi and Zambia around harvest in April-May. This picture needs to be considered in the context of transport costs which should not be more than US\$100/t even over quite long overland distances of as much as 2500km.

Over periods of a few months there have also been very substantial changes in prices during 2021 which raise concerns about the power of those able to hold stocks. Prices in Malawi, Zambia and

Uganda all increased from around the harvest (in April/May and December respectively). Prices in Lusaka changed from US\$357/t in May 2021 (prices in producing areas were even lower) to a high of US\$789/t just three months later in August 2021. Prices in central Malawi increased from US\$460/t in April at harvest all the way up to US\$1352/t in January 2022. It appears small farmers did not benefit from the price increases having already sold their crop. Prices in Kampala reached US\$960/t in September, before reducing again to US\$710/t at harvest time in that country.

Figure 16. Soybean producer/wholesale prices in regional and international markets



Source: based on price tracker data from multiple sources

Kenya had been able to source soymeal at reasonable prices in 2020 (obtaining prices of soymeal across other countries is an important extension which can be made to the AMO). However, in 2021 prices increased to US\$700/t in April – June, and then to US\$1200/t by August. At the same time soybean prices were around US\$800-1000/t.

The high prices mean that fish farmers and poultry farmers would be uncompetitive against imports of frozen chicken and fish. This is consistent with large net food imports of these products and reports of many animal feed mills closing down in Kenya in what is effectively a deindustrialisation process.¹⁵ This is while there are supplies available in the region and excellent potential for expanded output, *if* markets work effectively across borders such that farmers receive fair prices and product is delivered competitively to businesses requiring it as an input.

Prices from the Market Observatory app show smaller participants face even bigger differences than the averages for locations. For example, the app prices have indicated massive price differences within Malawi in some months as prices increased strongly. In southern Malawi, prices in November

¹⁵ This has been reported as an animal feed crisis in Kenya with the closure of livestock farming businesses and many feed mills <https://www.kenyanews.go.ke/govt-urged-to-address-animal-feed-crisis/>. According to information from the Association of Kenya Feed Manufacturers sourced by CAK, 10 feed milling companies exited in 2021.

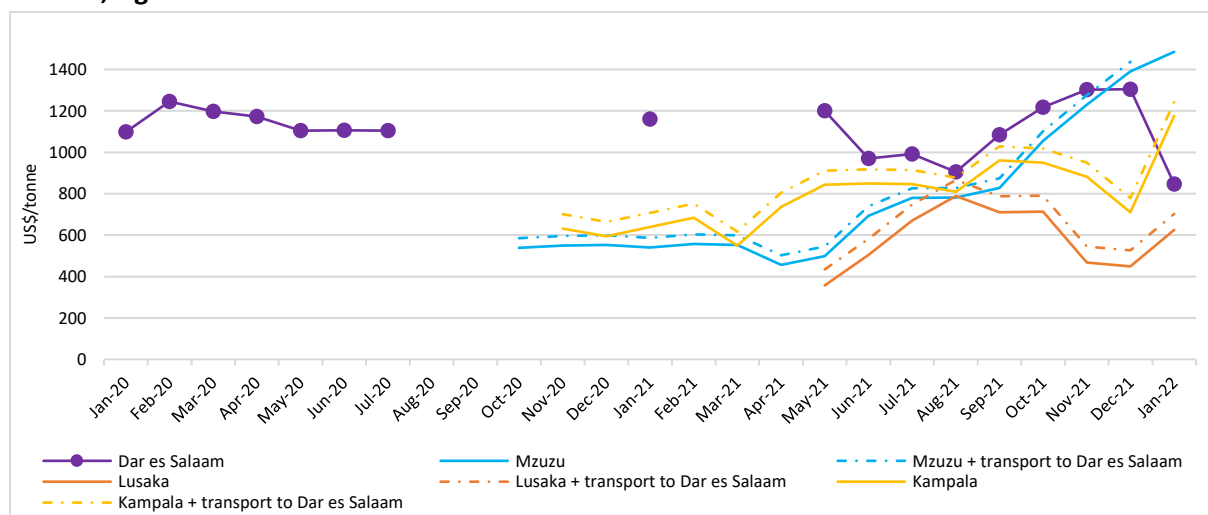
were just below US\$400/t, while they are much higher, as much as double, in central and northern Malawi.¹⁶

5.2. Comparison of producer/wholesale soybean prices against expectations of competitive markets

In our countries of focus, the good conditions and strong production levels in Malawi, Zambia and Uganda are consistent with relatively low prices in the first half of 2021 reflecting the net exporter status of these countries (Figure 17). Production increased further in 2020 and 2021 in Malawi and Zambia, with a large proportion being due to small-holders.¹⁷ There are major concerns about whether regional markets are competitive due to both price comparisons in geographic space, and price changes over time.

In terms of comparing prices over geographic space, there are very high margins between the producing areas around harvest time in April/May in Malawi and Zambia and the prices for soybeans delivered in areas which are net importers as opposed to what it should cost to deliver the product (Figure 17). The excess margins in the trading of soybean over selected transport routes in the ESA region have also been much bigger in soybeans than in maize, especially from Zambia to Dar es Salaam with excess margins of more than US\$700/t, or more than 150%, over estimated delivered prices in some months (see also Table 4). This raises real questions about market power specific to soybean trading.

Figure 17. Prices in Dar es Salaam compared against market clearing supplies from Zambia, Malawi, Uganda



Source: calculated from tracker data and efficient transport costs

These concerns also exist when we consider the price movements over time, which need to be investigated further. In the second half of 2021 Malawi saw continuing sharp increases in prices month-on-month to among the highest in the whole region, despite the country being a large net exporter. It might have been expected that prices would increase to the levels to deliver to Dar es Salaam and Nairobi, as was the case for Zambia, but from September 2021 prices in Zambia and

¹⁶ See price trackers.

¹⁷ See submission of CCPC, 2 February 2022; Nuhu et al. 2021.

Malawi diverged and Malawi prices continued to increase to extremely high levels which reflect artificial scarcity conditions being created.

In contrast to Malawi, prices in Zambia have since August dipped quite drastically to just under US\$450/t in December 2021. This was due to the imposition of an export ban by Zambia in August 2021. However, while Zambia's intervention may have disciplined local traders holding the majority of the soybean crop to drive down local prices, it also had the effect of exacerbating regional shortages pushing prices up as far as Nairobi and Dar es Salaam, and was reportedly linked to distress in Kenyan animal feed producers.¹⁸ The relaxation of the export ban in December 2021 saw prices fall by more than 30% in Dar es Salaam and in central Malawi, to US\$850-870/t in January 2022, and to increase in Zambia to US\$620/t (Figure 17).

The implication is that the region is unable to take advantage of increased supply in some locations to meet demand in other locations at competitive prices and placed great pressure on animal feed producers.¹⁹ The supplies appear to have been bought-up by intermediaries, driving-up prices further (above competitive levels) even in the areas which have had strong production. Buyers of soybeans at harvest who sold some three to five months later would have realized huge profits. Considering total production of around 800th tonnes across the three countries of Malawi, Zambia and Uganda (with negligible production in Kenya and Tanzania), this suggests that buyers of soybeans at harvest who sold some three to five months later would have realized huge profits.²⁰

The data point to possible competition issues at the trader level, given big margins over the traded price. A package of interventions to ensure regional markets work better is urgently required as we reflect on further below.

6. Rice markets analysis

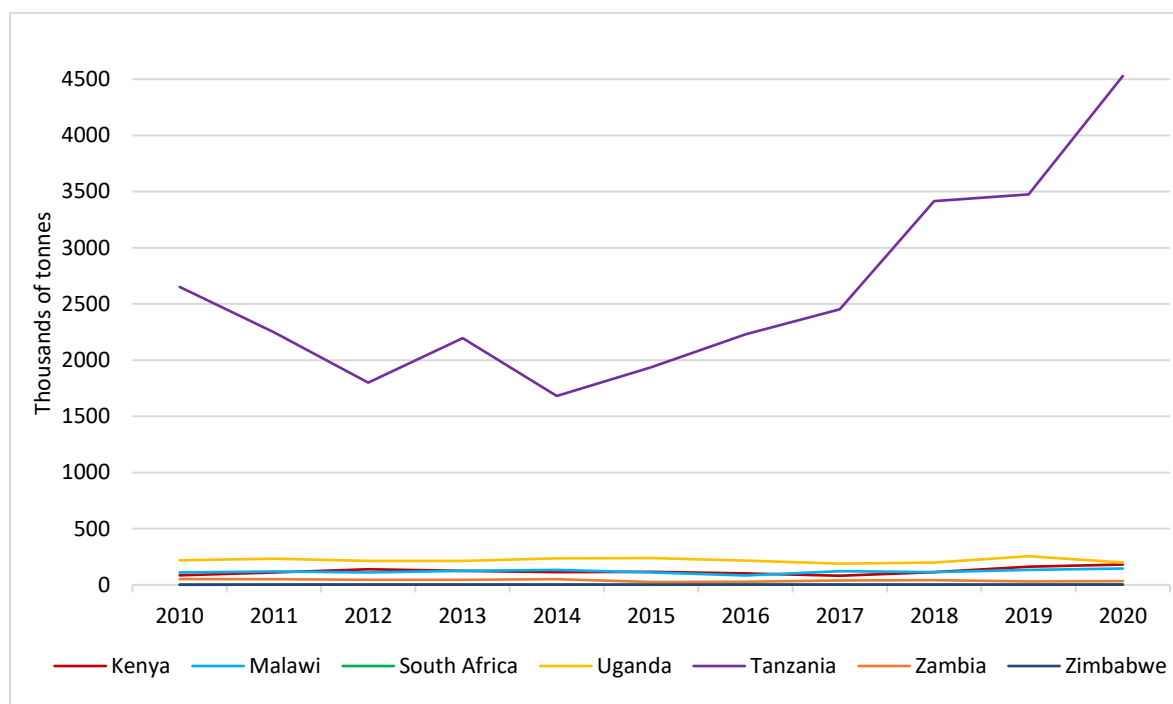
Rice is one of the most valued food crops on the African continent and rice cultivation in the continent has a long history and has shaped the diets of millions of people. However, only 60% of Africa's demand for rice is produced locally and the rest is imported (Zenna et al., 2017). Although most countries in the ESA rely heavily on rice imports, Tanzania is an exception as it is largely self-sufficient and by far the largest producing country in the region. The average rice production in Tanzania between 2010 and 2019 was 2.4 million tonnes per annum, with production as high as 4.5 million tonnes in 2020 (Figure 18).

Figure 18. Regional rice production

¹⁸ This led to an announcement in December 2022 of a temporary waiver in Kenya of duties on feed imports (which must still be from non-GM sources); <https://www.businessdailyafrica.com/bd/economy/feeds-makers-tax-waiver-raw-materials-imports-3657976>

¹⁹ <https://www.kenyanews.go.ke/govt-urged-to-address-animal-feed-crisis/>

²⁰ Notionally if buyers had secured the whole crop at harvest and then sold later at price peaks the profits would be more than US\$320mn. We note that ETG reports that it is the largest non GM soybean originator in Africa distributing more than 500th tonnes per annum.

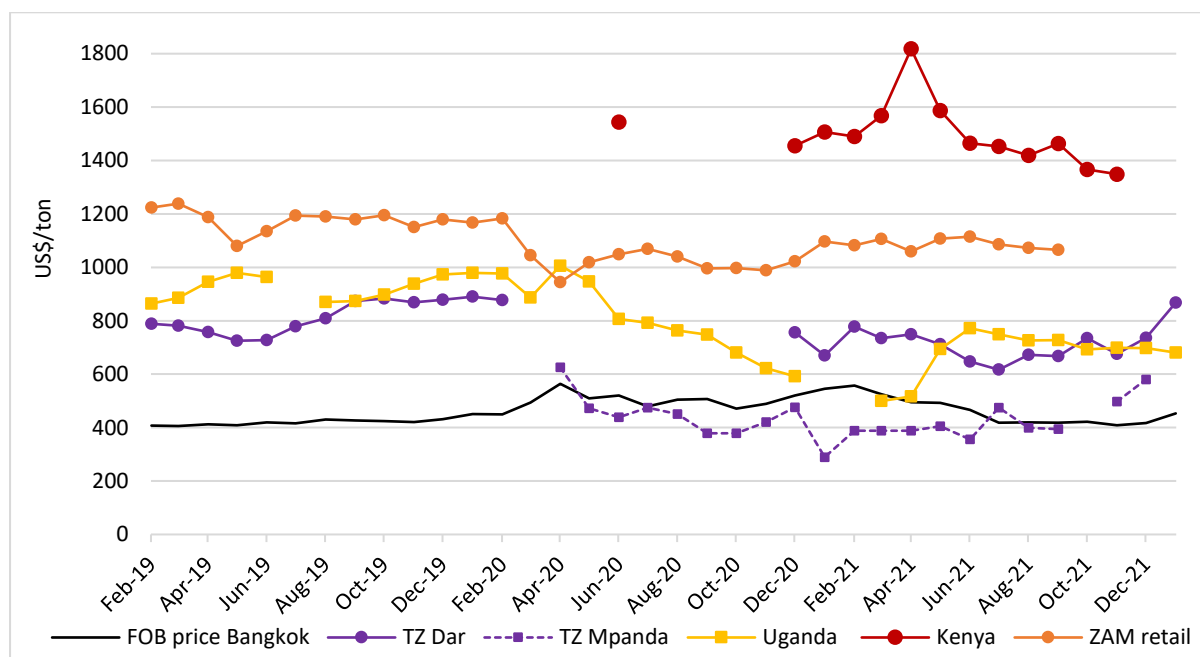


Source: FAOSTAT

Prices in the region as a whole are therefore set by imports from international sources, including the transport and related costs, required for markets to clear. It is expected that rice prices in the region are above the international FOB price in Bangkok with inland regions having higher prices reflecting the larger transport costs from the importing ports. This is the case with prices in Zambia (where these are also retail prices). However, it is surprising that average prices in Kenya are at very high at levels around US\$1300/t even though it can import directly through Mombasa whilst Uganda prices have at times been below prices in the port city of Dar es Salaam (Figure 19).

Tanzania's relatively low rice prices can be attributed to the strong production (Figure 19). Prices in Tanzania in the producing area of Mpanda in the west of Tanzania are in line with or under the international price at around US\$400/t, indicating large gains to millions of consumers and illustrating what happens when agricultural production is increased in Africa. However, as with soybeans, the price differences within Tanzania are much bigger than they should be given transport costs, as well as across the region.

Figure 19. Rice prices in regional and international markets



Source: Tanzania and Uganda is from WFP (VAM) and Min of Agriculture in Tanzania wholesale prices per 100kg. Bangkok prices are fob from USDA. ZAM retail from ZamStat, per kg; Kenya from RATIN.

Data from the app (although patchy) provide an insight into wholesale price levels in Malawi and Zimbabwe, as well as for other locations in Zambia and Tanzania. The data reflect very large differences in prices, with very high prices of above US\$1000/t in Harare, Zimbabwe, although lower prices have been reported in Manicaland. In Malawi, where there are also areas with substantial rice production, there have been relatively low prices reported by some market participants.²¹ If farmers in the region are to be encouraged to expand rice production it is important that they receive fair prices to incentivize production, and not low prices reflecting a combination of buyer power on the part of intermediaries and high transport costs and processing costs to get product to market.

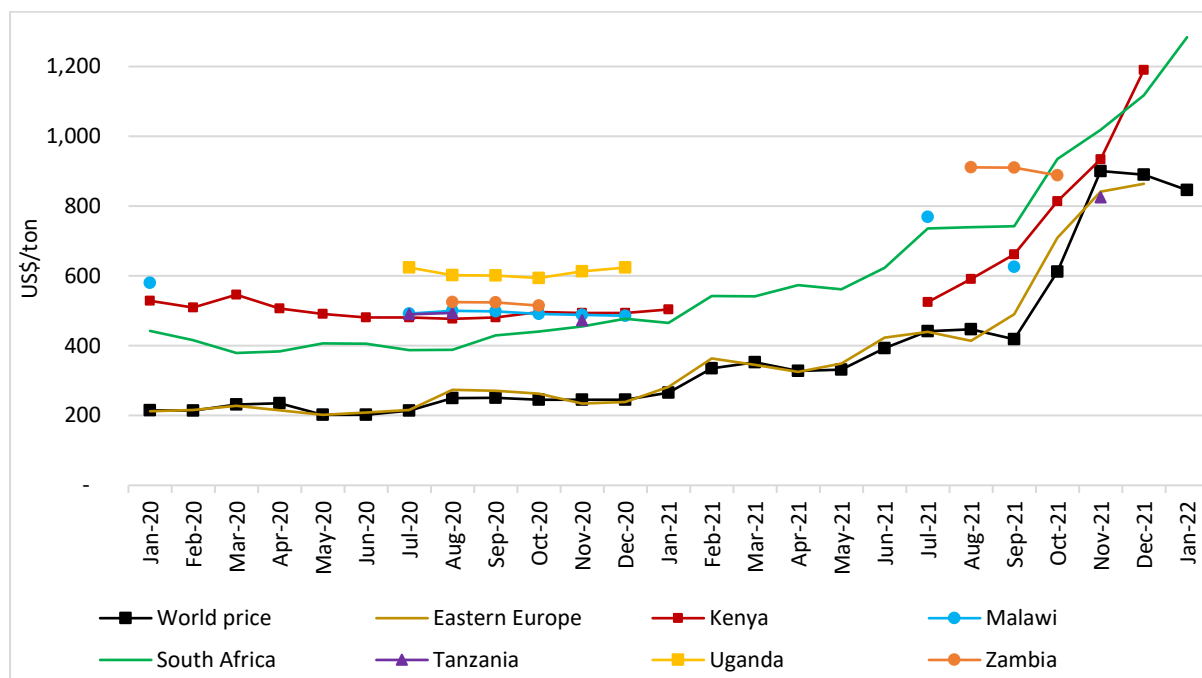
7. Fertilizer markets review

2021 has seen sharp increases in fertilizer prices owing mainly to higher input costs, especially rising natural gas prices. Pricing data for one of the main standard nitrogenous fertilizers, urea, indicate world prices have quadrupled from around US\$200/t in July 2020 to over US\$800/t by November 2021, with a doubling in prices over just the two months from September to November (Figure 20). As the single largest input cost for much of commercial agriculture, this is hugely significant for agricultural production in the coming season.

The somewhat patchy data indicates prices in Tanzania and Kenya which were some US\$250-300/t higher than world prices in mid-2020, or around double at the time, with even higher prices in Uganda and Zambia. Similarly, South African prices, on which there is more consistent data, have been significantly above the world market prices, and increased to reach US\$1284/t in January 2022.

²¹ See price trackers.

Figure 20. Urea prices



Source: World price is from the World Bank. South Africa & Eastern Europe prices are from Grain SA

Price data for 2021 for other countries is very poor, with data on prices in Kenya suggesting price increases have lagged international changes, and continued to increase to almost US\$1200/t in December 2021. Data for Zambia, Malawi and Tanzania are even poorer, while there are no prices reported for Uganda, motivating for the market observatory to track prices on an ongoing basis. Data from app users and market participants reported prices in Malawi in August 2021 for a 50kg bag were between US\$40 and US\$50 (or US\$800 - US\$1000/t), from US\$20 to US\$25 in the previous year.²² Even higher urea prices were reported in Zambia at US\$1030/t in October, up from US\$929/t in September. Interviews with app users in Tanzania indicated that prices in Tanzania are also high at US\$825/t for Urea and US\$955/t for DAP in November 2021.

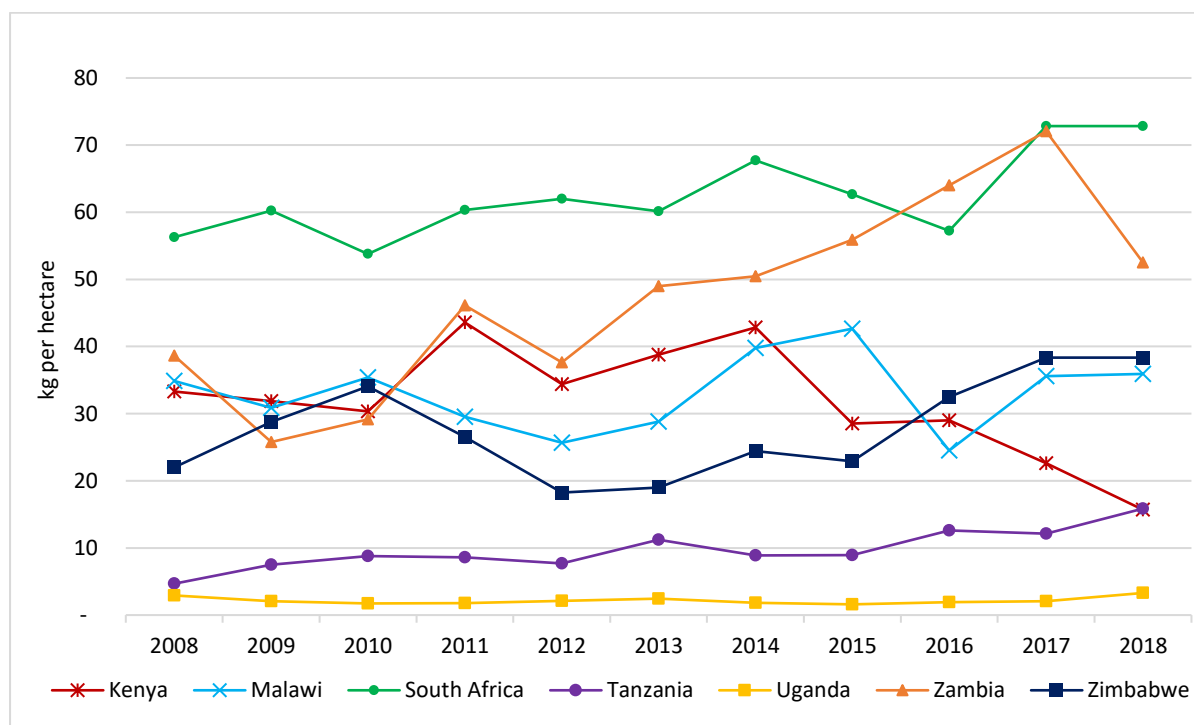
The higher prices in African countries compared to world prices are partly due to the costs of importing as there are no large-scale producers of nitrogenous fertilizers in ESA aside from in South Africa (where production is still substantially below local demand). Higher prices are also possibly also to collusion on the part of global suppliers and their local distributors (Vilakazi and Roberts 2019). Huge spatial variations in prices in Africa have also been identified by Bonila Cedrez, Guo and Hijmans (2020).

If farmers believe they will get good prices for their produce that can cover the higher costs of fertilizer, then they will purchase similar volumes as in the past and achieve reasonable yields. However, small farmers in particular which are credit constrained are likely to be unable to afford to purchase the same quantities they had been and so yields and production will fall. It is important to note that chemical fertilizer usage is very low in most countries in ESA. For example, fertilizer usage

²² See also https://www.voanews.com/a/africa_malawi-president-pledges-intervene-fertilizer-price-rise/6209863.html

in Tanzania is around one fifth of that in South Africa on a per hectare basis and this average usage in Tanzania also includes high levels of usage by large-scale producers for crops such as tobacco and sugar (Figure 21). Usage in Uganda is even lower. The most recent data available on fertilizer in the region indicates that South Africa’s use of fertilizer is as high as 73kg per hectare of arable land (similar to levels in Australia), and 53kg per hectare in Zambia while ranging between 15kg and 40kg in Kenya, Malawi, Tanzania and Zimbabwe.

Figure 21. Fertilizer use, kilograms per hectare of arable land



Source: World Bank

As costs to manufacture fertilizer continue to rise due increases in the price of natural gas, the price of fertilizer is projected to continue to increase. Moreover, exporting countries such as China and Russia have begun to impose bans and quotas on fertilizer exports for at least the next 6 months to support their domestic markets. The war in Ukraine is further constraining supplies and driving up prices.

Given the already extremely high international prices it is important that fertilizer prices are not increased further by excessive trader and transport margins. This has been the case in the past due to a combination of high port and logistics costs and collusion at international and national levels (Vilakazi and Roberts, 2019). Cartels have also been uncovered in Zambia and South Africa at various times.

The massive increases in fertilizer prices in 2021 has led to renewed attention on input subsidy programmes. For example, in Malawi and Zambia, governments are facing mounting pressure to address management malpractices, while maintaining subsidy beneficiaries and safeguarding farmers from rising input costs. Higher mark-ups further undermine the intended production and

welfare effects of input subsidies, on top of concerns that subsidies may mainly benefit well connected groups of farmers.

8. Effects on consumer prices within and across countries

In this section, we carry out a preliminary analysis on the potential mark-ups in the maize to maize meal (or maize flour) value chain, to understand the impact of market developments on consumers. As the Market Observatory has observed, prices for maize grain have been relatively low for the 2020/21 harvest across selected ESA countries, while prices have been extremely high in others. It is important to consider whether these prices are being reflected in food prices to consumers, with the main product being the staple maize meal. Significant mark-ups on maize meal would suggest a degree of market power along the value chain, either at the trader or processor level, or both. This section assesses whether there are signals of such issues which require further investigation. Maize is also an input along with soybean into animal feed, where the effect on consumers is in the supply and price of poultry and farmed fish further down the value chain. We leave this analysis for another paper.

The gathering of consumer price data was facilitated by the COMESA Competition Commission from member states. Online sources such as ZamStats were used in the case of Zambia. Table 3 gives the pack sizes and specifications for which the data were provided. Given that this section is concerned with the consumer, we assess the prices as reported in per kg terms, rather than per tonne terms as at the producer level. It should be noted that where data was already in per kg form (for Malawi and Tanzania), we have not been able to confirm if conversions were made from larger pack sizes. The team is currently following up with the relevant parties regarding this.

Table 3. Consumer price sources for maize meal/flour

Country	Quantity	Specification	Consumer price source
Kenya	per 2kg	Fortified and unfortified maize flour	National Bureau of Statistics.
Zambia	per 25kg	Breakfast meal and roller mealie meal	ZamStat retail prices
Uganda	per kg	Maize meal	Ministry of Trade Uganda
Zimbabwe	per 10kg	Maize meal super refined and roller maize meal	Ministry Agriculture Zimbabwe; Consumer Council of Zimbabwe (May 2021)
Tanzania	per kg	Maize flour	WFP(VAM)
Malawi	per kg	Grandmill and mgaiwa	Ministry of Trade Malawi

For some countries, such as Malawi and Uganda, data was received at the country level, while Kenyan data was disaggregated to the regional level. We reviewed prices across the main consuming cities in ESA, where possible. We do however note that for more in-depth analyses within countries data by major consuming regions/cities will be helpful.

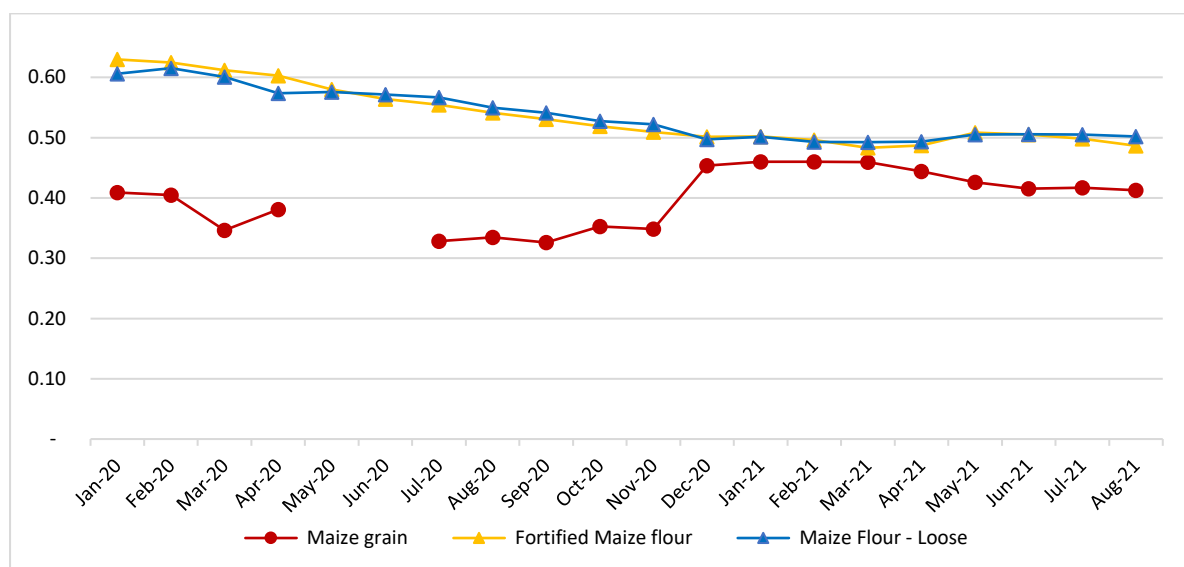
We identify issues warranting further investigation, across and within countries, including the role of increasing concentration at the milling level, as well as costs, taxes, and milling and retail margins. Given that we are dealing with consumer prices, we need to acknowledge that at the retail level, different brands can be sourced and retailed by different supermarkets and other retail outlets. This assessment represents a first step.

8.1. Consumer prices within countries

Kenya

Kenya had the highest maize prices of the countries considered and we compare the maize meal/flour prices with the producer prices assessed above. There are both fortified and loose maize meal prices reported. Fortification of maize is the addition of one or more vitamins or minerals to prevent micronutrient deficiency. In Kenya, malnutrition has been identified as a public health concern and therefore, national mandatory maize fortification was implemented in 2012 (Khamila et al., 2020). In Nairobi, the price of fortified maize flour was high at levels exceeding US\$0.60/kg (or equivalent to US\$600/t) in the beginning of 2020 (Figure 22). However, while maize prices increased in Kenya at the end of 2020, the maize flour prices had declined and remained at these levels over 2021, at least until August. A similar picture is evident for Mombasa (Figure 23). The margins for milling and retail had therefore decreased, increasingly being squeezed by higher costs of inputs, particularly on relatively high maize grain prices.

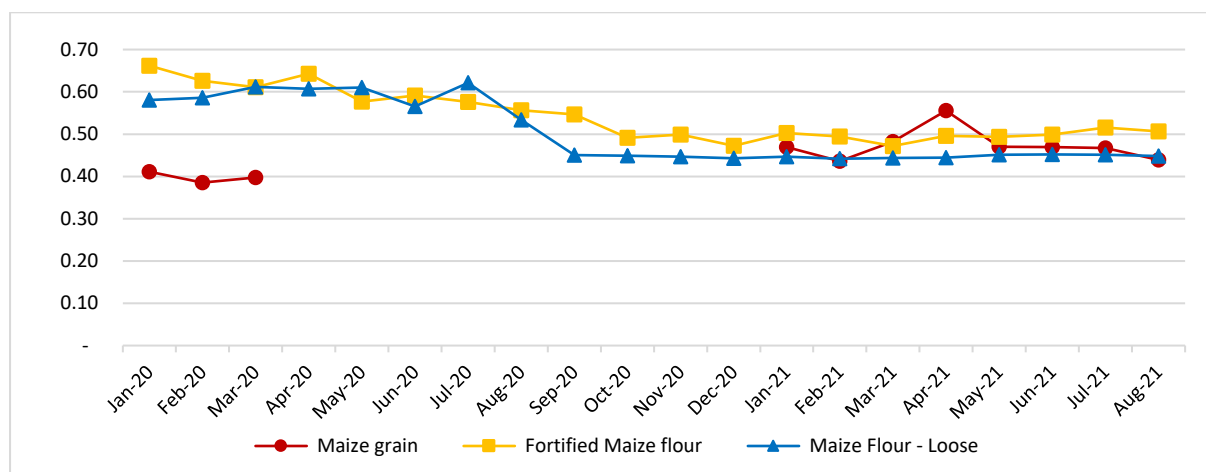
Figure 22. Kenya - Nairobi maize grain and maize products, US\$/kg



Source: Maize grain is from RATIN. Maize flour and Fortified maize is from Kenya National Bureau of Statistics.



Figure 23. Kenya - Mombasa maize grain and maize products, US\$/kg



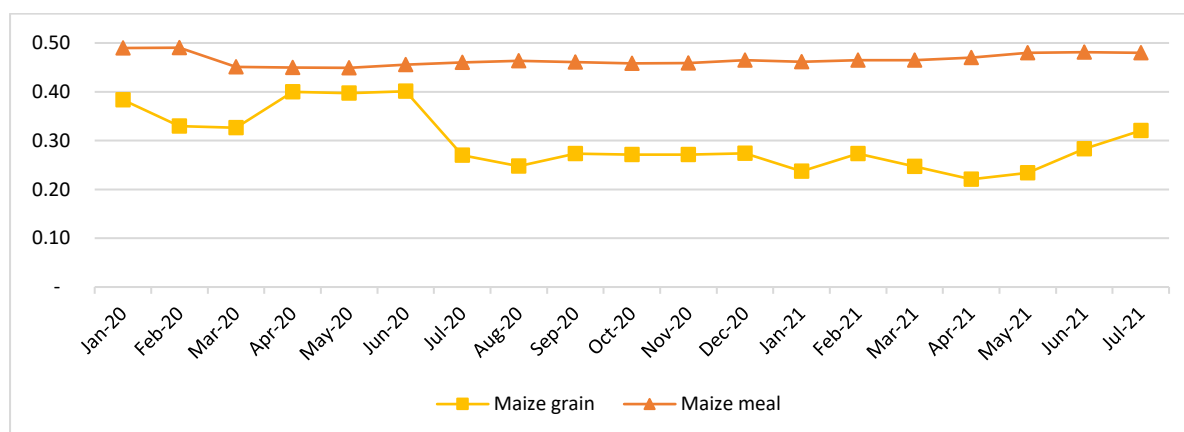
Source: Maize grain is from RATIN. Maize flour and Fortified maize flour is from Kenya National Bureau of Statistics.

The high maize grain prices, including due to the influence of traders and intermediates, and the negative impact on millers (as well as animal feed companies) has been identified as a key concern.²³

Uganda

In Uganda, while maize meal prices are less variable than the grain prices, as in Kenya, a different picture emerges, of maize meal consumer prices remaining at relatively high levels of US\$0.45-0.49/kg while grain prices reduced (Figure 24). Lower producer prices did not filter through to consumers and milling margins increased. (Note that maize prices increased further after July 2021 but we do not yet have consumer price data to compare with this).

Figure 24. Uganda - Kampala maize grain and maize meal, US\$/kg



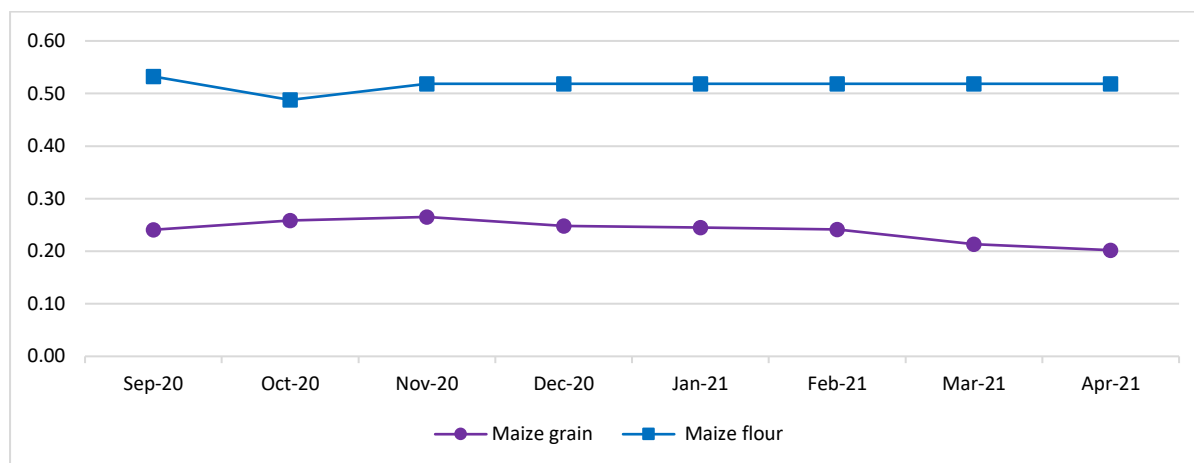
Source: Maize grain is from RATIN. Maize meal is from the Ministry of Trade in Uganda

Tanzania

²³ Call with Competition Authority of Kenya, Thursday 9 December 2021.

The margins of maize flour prices over maize grain prices in Dar es Salaam, Tanzania, have been substantial, with maize meal consumer prices about double the producer price of maize (Figure 25). The relatively low maize prices are not therefore reflected in low maize flour prices.

Figure 25. Tanzania - Dar es Salaam maize grain and maize flour, US\$/kg

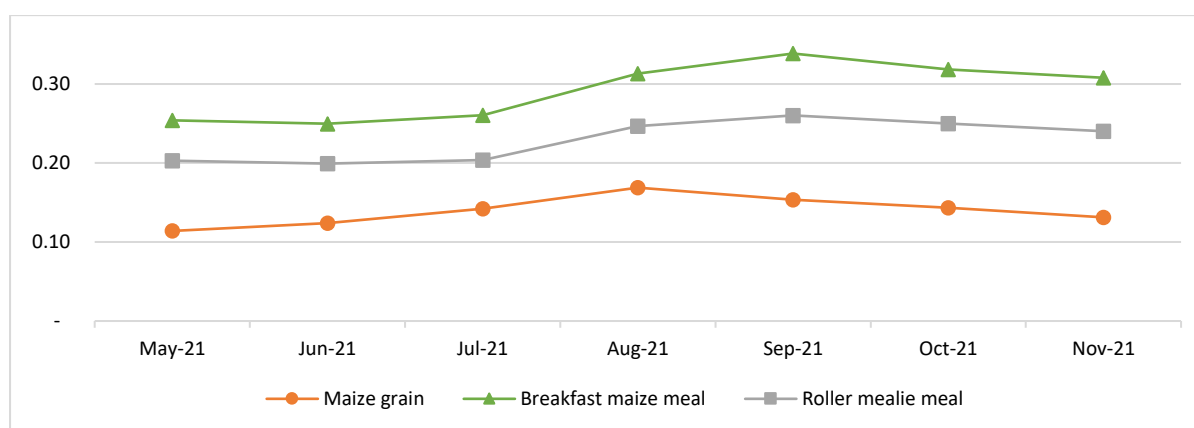


Source: Maize grain is from the Ministry of Agriculture in Tanzania. Maize flour is from WFP (VAM)

Zambia

In contrast to the prices in Nairobi, Dar es Salaam and Kampala, maize meal prices in Lusaka are low for both maize grain and the maize products, namely, breakfast maize meal and roller mealie meal which are around US\$0.30/kg and US\$0.20-0.25/kg (Figure 26).²⁴ On average, the price of maize products in Lusaka is half the price of maize products in Nairobi, and follow the trend of grain prices.

Figure 26. Zambia - Lusaka maize grain and maize products, US\$/kg



Source: Maize grain is based on price tracker data from multiple sources. Breakfast maize meal and roller mealie meal are from ZamStat retail prices per 25kg.

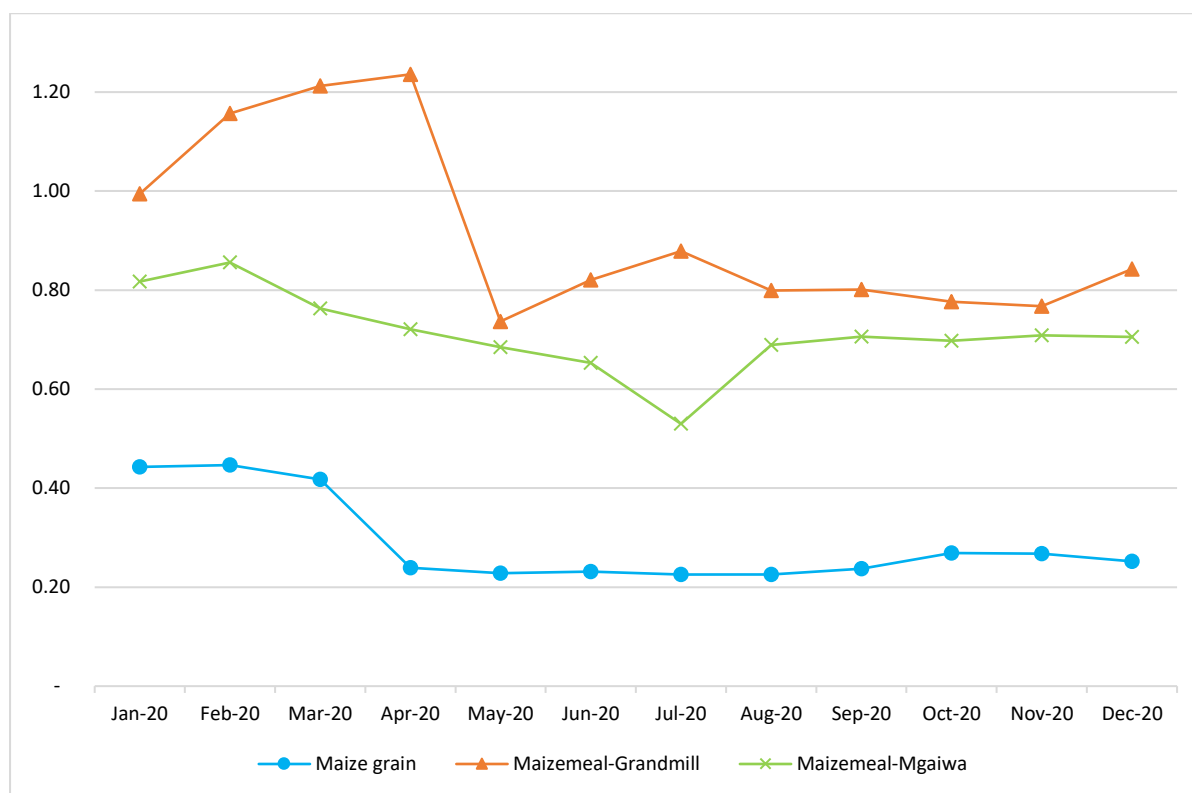
Malawi

²⁴ Note we have not taken into account any effect of the much larger pack size for maize meal in Zambia at 25kg from which the per kg prices have been calculated.

Malawi has amongst the lowest maize grain prices but among the highest maize meal prices suggesting issues at the milling level in that country. The very high apparent mark-ups can be seen in 2020 (Figure 27), with maize meal on average more than three times the maize price. Grandmill is maize flour that is produced through a two-step process of milling, a more refined maize flour than *mgaiwa* which goes through the milling process once. Grandmill is more comparable with the refined maize flour in other countries for which we have data.

The grandmill price in April 2020 was substantially high at US\$1.24/kg, more than US\$1/kg more than the maize grain price and had increased while maize prices were falling. In the case of Malawi, millers are receiving lower input costs with the potential to earn higher margins on the maize products. This is particularly concerning and needs further investigations to consider other market dynamics such as the role of supermarkets and retail margins, as well as taxes and milling costs and margins. Preliminary desktop research suggests the Malawian milling market is relatively concentrated relative to other ESA countries such as Kenya and Zambia. The lack in competition would therefore mean the market may have characteristics conducive to less competitive pricing for consumers. There is need to investigate this further, taking into account market dynamics.

Figure 27. Malawi maize grain and maize flour, US\$/kg



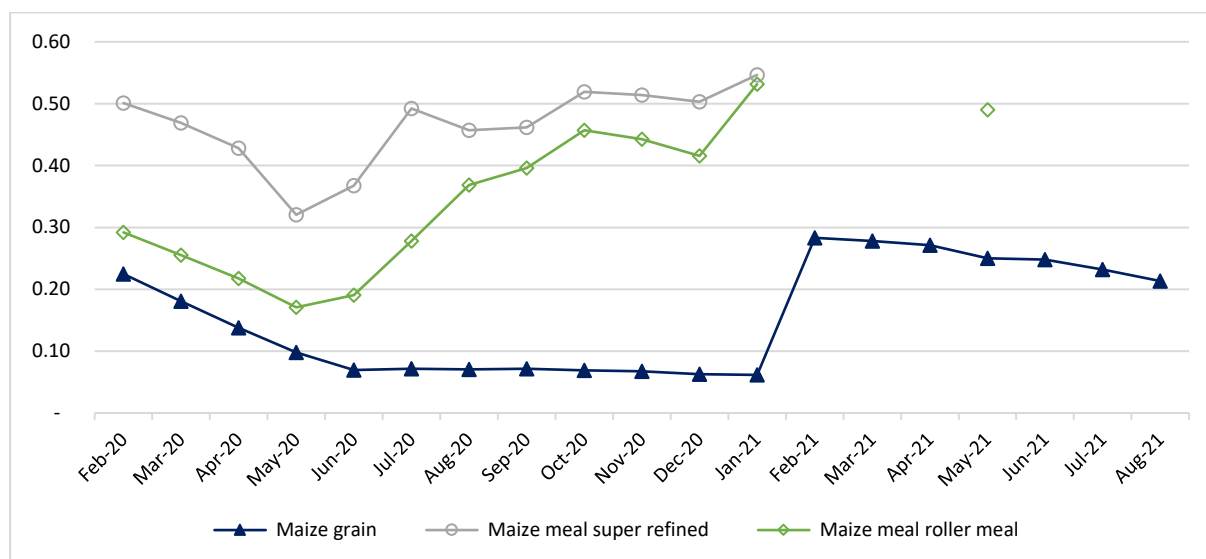
Source: Maize grain is from the International Food Policy Research Institute (IFPRI). Grandmill and *mgaiwa* from the Ministry of Trade in Malawi.

Zimbabwe



In Zimbabwe, the maize prices have been set by government with all sales and purchases having to be made with the Grain Marketing Board, since 2019. We reflect the maize prices as decided in February 2020 and February 2021, at the parallel exchange rate (Figure 28). The maize meal prices are more variable with margins of over the maize grain price, as maize meal super refined has been more than four times the maize price and roller meal more than three times the maize grain price, raising concerns at the milling and retail levels.

Figure 28. Zimbabwe maize grain and maize products, US\$/kg



Source: Maize meal super refined and maize meal roller meal from 10kg meal pack size, Zimbabwe Ministry of Agriculture, and Consumer Council of Zimbabwe (for May 2021). Maize grain price is fixed as set by government. The parallel exchange rate is used for all products.

8.2. Consumer prices across countries

Comparisons across countries can indicate areas for concern, however, it is important to consider and control for factors which may differ. The technology for maize-milling is mature and fairly standardized, while there may be differences in costs such as energy costs. The differences in the product specifications, pack sizes and packaging are relevant factors, while it is also necessary to remove the effects of value added taxes on retail prices in each country. We have adjusted for the much larger pack size for which data is reported in Zambia.

An investigation of price-cost margins would need to consider the milling costs along with other costs in the supply chain. Such information could be obtained in a focused inquiry by the authorities. However, as we highlight below, the countries have large millers, with multinational groups extending across the region, using standard technologies meaning that milling costs are likely to be similar. Comparisons of maize meal prices across countries, subject to taking into account differences in product specifications, point to questions about market outcomes.

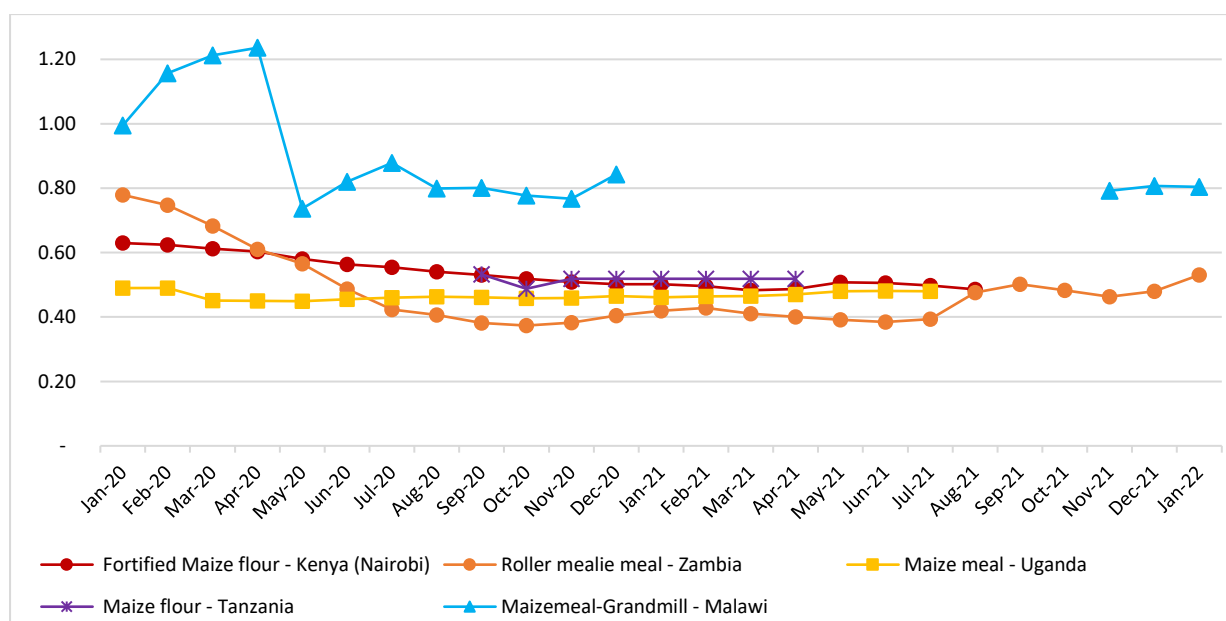
In addition, maize meal is tradable across the region, subject to country-specific provisions. These include fortification which was made mandatory in Malawi in maize flour in 2015 (along with other products including sugar, wheat flour and vegetable oil). It is not required in all other countries

(Zambia only requires fortification of sugar) meaning it can act as a barrier to trade.²⁵ In Kenya prices are recorded separately for fortified maize flour and loose maize flour. In Uganda large maize mills are required to fortify. This suggests there could be exports of maize flour to Malawi from some countries.

Given the major differences in maize grain prices across countries, the retail prices of maize meal across the region over 2020 and 2021 are very similar for Kenya, Tanzania and Uganda (Figure 29). This implies that margins at the trading and milling levels vary across countries, in that countries with high grain prices will experience squeezes in the margins at the milling level. In Kenya, for instance, preliminary findings indicate that margins for retail and milling decreased between 2020 and 2021 with increases in the main grain input cost. A similar picture has been observed with animal feed producers in Kenya which have been squeezed by very high soybean price. In effect, uncompetitive regional markets for grain are undermining industries in some countries.

On the other hand, in Uganda, relatively lower grain prices did not filter through to consumers at the retail level. This compares with Zambia where maize meal consumer prices reduced substantially in the first half of 2020 to be lower in the second half of 2020 and first half of 2021 than in Kenya, Tanzania and Uganda.

Figure 29. Maize meal consumer prices in regional markets, US\$/kg



Source: Kenya price is from Kenya National Bureau of Statistics. Zambia prices are from ZamStat. Uganda is from Ministry of Trade in Uganda. Tanzania is from WFP (VAM). Malawi is from the Ministry of Trade.
 Note: This requires further investigation. To take into account the large pack sizes (25kg) in Zambia on which the data are based, we have used estimates of the ratio between small and large pack sizes to adjust Zambian prices upwards by 93%. Grandmill is the standard for refined meal in Malawi and is fortified. There is another less refined meal in Malawi called Mgaiwa which is not comparable across other countries. The price of

²⁵ This is the case even although the fortification standards are meant to be harmonized across the region. <https://projecthealthychildren.org/food-fortification-standards-are-officially-mandatory-in-malawi/>



fortified maize flour in Kenya is derived from the 2kg pack size and does not vary from the loose maize flour price.

The case in Malawi is much more striking, with the country having among the *lowest* grain prices in the region yet the *highest* maize meal prices. The difference is especially notable with regard to neighbouring Zambia, with which one would expect cross border trade.²⁶

We explore reasons as to why prices, may be relatively higher in some areas than in others:

- Fortification costs in Malawi could add to costs. However, these are almost certainly negligible compared to the mark-ups. A study done on the possible costs in Zambia and Uganda found that the costs were just US\$0.003-0.004/kg and maize flour prices would be increased by just 0.9% in Zambia (Fiedler et al. 2014). It is also consistent with the extremely small differences recorded for fortified and loose maize flour in Kenya.
- Different VAT rates could account for cross-country differences in consumer prices. In all the studied countries, maize and products from maize are zero-rated, and thus VAT does not apply.
- Issues of comparability of product specifications: there are different ways in which maize meal/flour is referred to in the countries, as noted above, and these include how refined the milling is. While we do not have data on the specifications, we note that this is highly unlikely to explain the magnitude of the differences observed.
- Differences in the pack sizes on which retail prices are reported. In particular, the prices in Zambia were provided for 25kg pack sizes. Bulk packs are clearly cheaper on a per kg basis than smaller pack sizes. We have applied a substantial upward adjustment to the Zambia data to control for this.²⁷

Having taken the above factors into account, we need to consider the implications of concentration and competition, within and across borders, which we do in the following section. In contrast, we find that the maize value chain appears to be working relatively better in markets such as Zambia (in part owing to some market interventions by competition authorities), and markets such as in Kenya and Uganda show an indication of some cross border trade in both maize grain and maize products, despite relatively higher prices.

The variations in price across the region need to be studied further, both for maize meal and other staple households such as rice. It is clear that there may be other factors at play that increase mark-ups along value chains, other than transport and storage costs.

The relatively lower prices in Zambia are also noteworthy, not only in that high food prices are not a norm across African cities, but also for the need to transfer knowledge and best practices across markets for better outcomes – a function that the COMESA Competition Commission is well placed to enhance. For instance, between 2015 and 2019, the Competition and Consumer Protection

²⁶ Notwithstanding issues of different fortification requirements.

²⁷ Further details were requested from Zambia. In this report we have relied on data on different pack sizes in Malawi to estimate an adjustment of 93%.

Commission (CCPC) noted that the Millers Association of Zambia and the Poultry Association of Zambia exhibited behaviour of agreeing and subsequently announcing the prices of day old chicks and mealie-meal.²⁸ The CCPC issued warnings prohibiting this conduct, noting that it signalled price direction and creates anticipation on the market which is unnecessary and may distort independent decision making on pricing of day old chicks and mealie-meal by players.²⁹ Importantly, both associations also had ongoing investigations against them.

9. Competition and market structure

9.1. Factors explaining market outcomes

The market outcomes can only be mapped out within and across countries based on what data is available. The market observatory thus plays an important foundational role in being able to see what the outcomes are. This is the basis for considering candidate explanations, including possible anti-competitive conduct, barriers to trade in cross-border markets and factors which may impede entry and competition by smaller rivals.

There are different market levels which need to be considered. Further inquiry will likely be required at each of these within and across countries given the country-specific nuances in order to arrive at firm conclusions. Here we set out the main areas of concern.

There is a wide range of issues which impact on farmers and whether they are offered fair prices for their produce and are charged reasonable prices for inputs, as well as the farmer capabilities and technologies. There may be market power in local markets and farmers may need better information on prices, however, information is more readily available with the connectivity now available via mobile phones (added to other traditional means such as radio and extension officers).

Our focus starts from the prices of product aggregated in market towns such as by agro-dealers, traders and processors, and the prices charged in the main areas of demand in cities. For this we need to understand transport services, storage and trading operations, including border restrictions and regulations. We also need to consider buyers in key segments such as processors, and the pricing and terms of products derived from the agricultural commodities and the margins made.

Market power and apparent excess margins

The Market Observatory results over 2021 emphasize the need to inquire into the transport, storage and logistics issues. The differences in prices between locations on transport corridors translate into rents to transporters and/or arbitrage margins that large traders (with better market information than small participants and access to transport) can make. We use our producer/wholesale price data to compute the excess margins after taking into account reasonably efficient transport costs (estimated at US\$0.04 per tonne per km) from a source location to the three largest locations of demand, in Nairobi, Dar es Salaam and Johannesburg (Table 4). In each case the first location is assumed to be the supplying region.

²⁸ <https://www.ccpc.org.zm/details/7>

²⁹ <https://www.ccpc.org.zm/details/7>

Interestingly, the margins are much bigger in soybeans than in maize. Indeed, for many location pairs the average margins on maize prices are less than US\$20/t. The notable exception is maize supply to Nairobi, given the restrictions on imports into Kenya from November 2020 due to aflatoxin concerns.³⁰ For soybeans, however, excess margins are more than US\$300/t to Dar es Salaam, from south-west Tanzania and from Zambia or Malawi (Mzuzu). To Nairobi from Lusaka the margins are over US\$100/t.

Table 4. 'Excess' margins, after reasonably efficient transport costs, 2021, US\$/t

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Songea – Dar es Salaam	Maize	2	21	-11	-14	0	-18	55	36	41	31	54	-1	16
	Soybean	367				775	502	524	437					521
Mzuzu – Dar es Salaam	Maize	-40	-29	-57	-55	2	-29	44	26	22	12	55	54	0
	Soybean	573				654	230	165	77	210	115	26	-133	213
Mzuzu – Nairobi	Maize	157	171	171	169	200	182	194	201	189				181
	Soybean							89	79	21				63
Lusaka – Dar es Salaam	Maize					26	-6	38	-18	0	0	41	56	17
	Soybean					774	396	253	48	305	434	766	787	470
Lusaka – Nairobi	Maize					220	199	183	152	162				183
	Soybean							172	45	111		536	257	224
Kampala – Nairobi	Maize	197	161	187	197	166	106	70	74	-46				124
	Soybean							62	91	-72				27
Lusaka – Johannesburg	Maize					71	38	24	-9	3	15	27	20	24
	Soybean					112	-76	-202	-332	-286	-317	-63	-11	-147
Harare – Johannesburg	Maize	127	-97	-96	-88	-41	-62	-42	-30	-7	0	-1	2	-28
	Soybean								-92	145	141			65

As things stand, it results in processors in Dar es Salaam and Nairobi being uncompetitive (reflected in the crisis experienced by animal feed businesses in Kenya) and ultimately high food prices to consumers.

There are various factors which contribute to high transport rates across the region, including structural and strategic entry barriers in transport markets, costs related to transit formalities, government intervention as well as the lack of transport alternatives (such as reliable railway transport). Moreover, the landlocked status of some countries such as Malawi, Zambia and Zimbabwe poses a development challenge with a greater distance to and from markets and a dependency on the transport and logistics networks of neighbouring countries through which products must travel (World Bank, 2021). The evidence overall points to issues relating to competition and market power in transport and trading, along with border obstacles. This includes protection of local transporting industries in some countries.

³⁰ There had been high reported aflatoxin levels in imports. Aflatoxin is a poisonous compound produced by moulds that grow on cereals and nuts in warm and humid conditions, either before or after harvest.

The huge price swings over time points to issues relating to storage facilities which impact on the ability for competing to supply over the whole year from the harvest time. There are also important links between traders and control over storage facilities which need to be better understood. Finance is also important for the ability of producers to be able to store some of their crops and not sell immediately after harvest if prices are very poor.

Trade and government interventions

Various ESA countries have engaged in the imposition of trade restrictions in the name of ensuring domestic food supply and to protect consumers from international food price hikes, especially with regard to maize. However, studies have shown that trade restrictions, particularly on maize, have historically been ineffective in managing prices in the long run and tended to exacerbate price fluctuations (Pierre and Kaminski, 2019; Mabiso and Pradesha, 2013; Gondwe and Baulch, 2017; Porteous, 2017; Edelman and Baulch, 2016; Paul and Edelman, 2015; Baulch and Ochieng, 2020). Furthermore, a trigger in price shocks in one domestic market can generate lasting deviations in prices in adjacent markets within the region (Pierre and Kaminski, 2019), resulting in significant price differences over time. Restrictions appear to have exacerbated spikes in neighbouring countries facing a production shock, for example, in Malawi in 2019 when the cyclones hit, while Zambia and Tanzania blocked exports.

Zambia has historically imposed export bans on maize and maize-meal from time-to-time, such as in October 2018, where the country experienced a slump in output to an annual quantity of 2.4 million tonnes down from 3 million tonnes in the previous harvest.³¹ A series of export bans between 2008 and 2016 were also implemented as a result of poor harvests in some years due to poor rainfall and armyworms. However, in most years there were substantial surpluses which could have been exported, and an estimated US\$1.4bn of export earnings were foregone over the whole period (according to estimates of Chisanga et al., 2018). Zambia has also had a 10% export tax on maize which suppresses the local price.

Malawi has also used export bans to control trade flows of maize and soybean since the early 2000s for national food security and to benefit local buyers such as processors and poultry farmers (Edelman and Baulch, 2016). Ad hoc export bans have been found to contribute to higher levels of maize price volatility in domestic markets and to be redundant in some cases as domestic prices are above export prices (Edelman and Baulch, 2016). Farmers in Malawi have in fact also been receiving low prices, below the recommended minimum farm gate prices, meaning attention should rather be placed on resolving issues relating to high transport costs and trader margins. Kenya, Tanzania and Zimbabwe have also used the same rationale for imposing export bans on maize (but less so for other crops including soybeans).

Import restrictions on maize have also been imposed by some ESA countries to protect local producers. In November 2020, for example, Kenya imposed an import ban on maize imports from its east African trading partners on the basis of aflatoxin levels being higher than safety levels. Aflatoxin is a poisonous compound produced by moulds that grow on cereals and nuts in warm and humid conditions, either before or after harvest.

³¹ <http://www.renapri.org/zambia-lifts-costly-maize-export-ban/>

Zimbabwe has set a very high price in 2020 at which maize would be purchased from farmers by the single channel Grain Marketing Board, and in 2020/21 imposed import bans on maize, maize meal and other maize products in order to prevent customers from buying cheaper imports. However, the exchange rates reflected in auctions in more recent months (rather than the rate which had been set previously) mean the prices are more in line with neighbours.

Liberalised markets are, however, subject to the concerns identified with market power and anti-competitive conduct. Effective markets also require appropriate public policies and investment to support critical infrastructure in storage and logistics. The issue is about appropriate market-shaping rules and policies, not a simplistic debate about more-or-less government. The realities of geography, water and land, along with extreme weather shocks mean a regional approach is urgently required for resilience in value chains and food production systems (see AGRA, 2021).

Discretionary trade restrictions have also led to considerable trading of grain across ESA through informal channels to by-pass the restrictions (Burke and Myers, 2014; Pierre and Kaminski, 2019). Informal traders deal in small quantities (usually just 50–100 kg at a time) without trading licenses and with no official record of their transactions (Burke and Myers, 2014). With hundreds or sometimes thousands of small informal traders operating daily, however, the aggregate volume of informal trade can be substantial. Informal trade links within the region have been found to be relatively competitive with rapid price transmission (Burke and Myers, 2014; Bouet et al., 2018), as opposed to formal trade links, where significant government involvements in formal cross-border trade led to a breakdown in spatial price transmission and have contributed to long run price volatility (Burke and Myers, 2014; Edelman and Baulch, 2016; Pierre and Kaminski, 2019).

In summary, while there is evidence that ad hoc trade restrictions have often not yielded their intended results and may have benefitted special interest groups, it is also clear that free agricultural markets have not worked so well. Issues of concentration and substantial market power in agricultural and related markets (such as for transport) mean markets within ESA are unable to function effectively.

The issues that the Market Observatory has uncovered so far indicate that the focus needs to go beyond whether or not there is need for less or more government intervention. We need to address what are appropriate interventions to fix the root causes for market outcomes, such as anti-competitive arrangements, poor infrastructure and lack of adequate information to effectively meet the regional demand for food. This begins with building knowledge bases such as the Market Observatory in order to identify practical action areas from which institutions such as the COMESA Competition Commission can address and implement to make food markets work better.

Analysing competition and market power requires consideration of markets at different levels of value creation from inputs and primary production through trading, processing and sales to end consumers. Regional value chains (RVCs) describe the linkages and governance of the activities across different markets (Black et al. 2020; Paremoer, 2021; Das Nair, 2021). Appropriate investments and policies are required for inclusive growth and increased participation, of which competition policy is one critical area. Agro-processing regional value chains are among the most importance for African countries, given the potential for improved agricultural productivity and

output, along with the growing demand for processed food within the region (McMillan, Rodrick and Verduzco-Gallo, 2014; Paremoer, 2021).

We make a preliminary assessment of markets relating to the maize to maize meal and soybean to poultry value chains, drawing on the information gathered thus far, which focuses mainly on Zambia and Malawi.

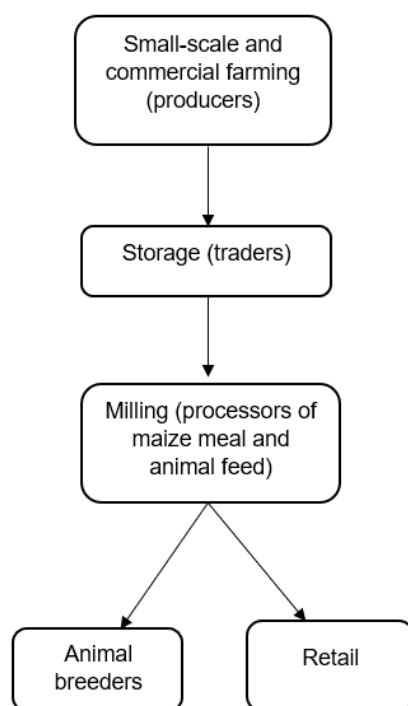
9.2. A preliminary assessment of market structure and competition issues in maize to maize meal

Mapping out the maize to maize meal value chain

The maize industry contributes significantly to the economies in the region as a major agricultural crop, produced by smaller farmers in most of the countries across large areas of land, and in milled form it is the main staple food (white maize) and an important input to animal feed (yellow maize) (Bell et al., 2020). The maize to maize meal value chain is a relatively straight forward value chain, consisting of a primary industry (farmers and storage, trading) and a secondary industry (dry and wet milling, and animal feed) (Figure 30). There are different segments at each level. In agriculture production small and medium farmers compete with large-scale commercial farmers. At the milling and processing level, informal and small-scale community milling exists alongside large-scale industrial mills. Maize is milled for human consumption (mainly white maize) and sold through different retail segments, as well as for animal feed (mainly yellow maize) sold into poultry and fish farming and for other animal feed.

Figure 30. Maize value chain





Source: Developed by authors

Changing demand patterns, urbanization and the spread of supermarkets and trading companies have meant investments in more industrial processing. This has been accompanied by liberalization of maize markets and more private ownership of grain storage facilities (Chauvin et al., 2017) and implies higher levels of concentration given scale economies at different levels of the value chains.

Concentration in maize trading & transport

The trading and transport activities are undertaken by firms engaged in agricultural commodity trading and logistics more generally. There are specificities relating to the storage of maize, including typically a bigger role for government storage facilities as well as more government market involvement in maize than in other crops. On the buying side, there are milling companies which are oriented specifically to maize milling, alongside very large millers of maize together with other grains such as wheat. These companies may also be integrated into activities such as animal feed.

The increasing concentration in agriculture commodity trading globally, with a very few traders dominating international markets (Blas and Farchy, 2021; IPES-Food, 2017; De Maria et al. 2020; Howard and Hendrickson, 2020) is being replicated in Eastern and Southern Africa (OECD, 2018; Sitko and Chisanga, 2017; Bosiu and Vilakazi, 2020).

The expansion of multinational traders in what Sitko et al (2018) term the 'Quiet Rise of Large-Scale Trading Firms in East and Southern Africa' holds out the prospect of investment in improved transport and logistics. The major traders are also integrated into transport (as are some of the very large milling companies such as Bakhresa). However, as Sitko and Chisanga (2017: 169) observed, it is also the case that 'industry consolidation and a substantial decline in competition in the grain-

trading sector... will have long-run detrimental effects on producer and consumer prices'.³² This points to the critical role of the CCC in regional competition enforcement and merger review, as well as to the need for ongoing monitoring of developments and market outcomes.

The expansion of multinational trading companies has occurred through different channels. First, major global traders including the biggest, Cargill, are well established in cash crops and have expanded into grain and oilseeds in the region, as well as vertically integrating backwards into agro-inputs supply and forwards into processing. Second, South African and East African agro-conglomerates, led by ETG, Afgri, NWK and Metl group, have expanded across borders, including through partnerships (such as NWK with global trader Louis Dreyfus, in some areas).³³

The expansion of multinational traders has not apparently improved the efficiency of cross-border maize markets which remain subject to huge variations in prices across locations and volatility over time (Bonilla-Cedrez et al. 2020; Nsomba et al. 2021). As already observed, there are a number of explanations for this including trade restrictions imposed from time to time and the need to invest in harmonized standards. Outcomes in 2020 and 2021 have been particularly poor in Kenya which relates to the imposition of restrictions and apparent issues relating to the influence of traders Kenya. These should be investigated further.

Storage facilities are essential for farmers to benefit from commercial market opportunities and not to be subject to unfairly low prices at harvest time. They are also part of aggregation of grain for trade and export, including supply to the milling and animal feed industries. Limited access to grain storage facilities also results in significant losses in grain. Ambler, de Brauw and Godlonton (2019), for example, found that Malawian farmers lost 5%-12% of their harvest due to lack of storage access in the 2018/2019 harvest season alone. In many countries, the establishment of large concrete silos, as essential infrastructure for agriculture, has been supported by governments along with linked transport facilities such as railway sidings.³⁴ It is also necessary for grain storage to be able to guarantee the quality of the grain stored, such as through warehouse receipt systems (WRS), so that it can be traded with the buyer being assured of the product when it is required.³⁵ The depositor typically pays once off handling fees and time-dependent storage costs are then incurred.

Commercial storage facilities have historically been provided for through marketing boards which were typically established in various ESA for controlled maize marketing and other grain commodities. As part of their mandate, marketing boards established a network of silos as part of an expansion drive that was meant to absorb the previously marginalised communal farmers into mainstream grain markets (Sitko et al., 2017).

In Malawi the Agricultural Development and Marketing Corporation (ADMARC) is mandated to support farmers through subsidised buying and selling of agricultural produce to ensure inputs and an income for farmers, food security in Malawi and to increase the volume and quality of agricultural

³² This was with specific reference to the implications in Zambia.

³³ See Bosiu and Vilakaz (2020); Sitko and Chisanga (2017).

³⁴ This was the case in South Africa, as well as countries such as Canada.

³⁵ Before being accepted for storage in a WRS facility, the commodity is inspected to verify that it complies with set quality standards. Once accepted, a detailed contractual document, known as a warehouse receipt, is drawn up which guarantees the holder a specified grade, quantity, and security of the stored agricultural commodity.

exports through developing new foreign markets. As part of this mandate, it also has storage warehouses which it uses to facilitate the commercial and 'social' maize market once it buys maize from smallholder farmers (Gondwe and Baulch, 2017). Zimbabwe's Grain Marketing Board (GMB) dominated the grain storage industry emanating from the controlled marketing of maize and other commodities (Mucheru et al., 2010). The deregulation of grain trade in 2009, however, led to the emergence of key private players in the storage and trade sectors.

Under private ownership by traders, storage facilities can provide the owner with a degree of local market power over farmers who otherwise may have poor alternatives. This has been the case in South Africa where one of the first abuse of dominance cases related to exclusionary conduct by Senwes (see Roberts, 2012). There has also been widely reported increases in concentration of grain trading globally, with a very few major traders accounting for a substantial proportion of agricultural commodity trading and have progressively extended their operations in developing countries (Shand and Wetter, 2019; Swinnen, 2020). These international giants have extended across the ESA region (Sitko et al., 2018), led by Cargill and the Louis Dreyfus Company, alongside multinationals with their roots in the region, notably ETG and AFGRI (Bosiu and Vilakazi, 2020).³⁶ Market integration requires extensive investments in logistics and storage facilities which large traders can make. However, traders also benefit from a lack of transparency, insider information and concentration which enables them to corner markets (Djanian and Ferreira, 2020). The major groups are also vertically integrated to significant extents, from inputs through to processing.

Improved trading and storage services have been promoted through the establishment of commodities exchanges in a number of countries. In Malawi, the Agricultural Commodity Exchange for Africa (ACE) and Auction Holdings Limited Commodities Exchange (AHCX) have been established and both provide WRS services. There are 19 ACE-certified warehouses in Malawi and 15 deposit points serving as aggregator centres. However, the exchange does not appear to be effective in terms of offering ongoing prices for buying and selling.³⁷ More recently, Purdue Improved Crop Storage (PICS) bags have been introduced in Malawi as an alternative means of storage.³⁸ The Zambian Commodities Exchange (ZAMACE) was established in 2014 and authorized to manage a WRS. Despite being given statutory powers it is effectively not operational, with reasons given including the small market size and lack of users, government interventions in grain markets and limited financial sector participation (Jayne, et al., 2014; Mukumba and Musiwa, 2018).

Generally, it has been observed that storage facilities are not readily available and/or are expensive for small farmers, despite liberalized markets and the emergence of private facilities. In Zambia, for example, access to a fully secure and functional 40x20m² storage facility costs approximately

³⁶ Cargill operates in Kenya, Zambia and South Africa including having acquired Lesiolo Grain Handlers Limited in Nakuru in 2014, in Zambia it includes grain & oilseeds trading, soybean crushing, refining, supplies of oil, soy meal for animal feed; Louis Dreyfus has operations in Kenya, Zambia, Uganda and South Africa; ETG operates across the continent and is vertically integrated from inputs to processing of output, it is the largest Non-GMO originator of soybeans in Africa, including in Zambia, Malawi, Tanzania, and Uganda; AFGRI's operations include Zimbabwe, Zambia, Tanzania and Uganda, as well as South Africa, Mozambique and Botswana. Sources: company websites.

³⁷ The prices offered on the exchange are patchy and out-of-date based on the website.

³⁸ <https://medium.com/enabling-sustainability/managing-post-harvest-losses-in-malawi-f694f003259e>

US\$4000/month.³⁹ This equates to storage charges of around US\$5-10 per tonne each month on the assumption that 400 to 800 tonnes are being stored on average. The government provides storage facilities through the Food Reserve Agency for approximately US\$800/month for the same size but access is constrained by limited availability.⁴⁰

Maize-milling

Maize offers few opportunities for further processing other than milling into meal or flour for human consumption and for processing to stock feed (along with other feed components). Some milling companies have diversified into other foods such as bread, processed snacks and meat and fish products. The Millers Association of Zambia, for example, comprises of members engaged in commercial milling of maize meal, flour, as well as stock feeds (either for linkages in their own businesses or to supply entities to produce processed foods) (Chapoto et al., 2016).

Maize-milling has different segments, with lower-tech small-scale hammer mills being in operation alongside large-scale highly mechanized mills for ultra-refined maize flour (Bowman, 2021). There are different price points and consumer preferences for these segments. Maize milling can appear highly competitive if one considers the total number of producers, however, if one focuses on the refined maize meal sold in supermarkets then producer numbers are much lower and concentration is higher. It is important to bear in mind that there may also be local geographic markets in the larger countries which would require a careful competition assessment to determine.

From the information we have been able to obtain, concentration in maize-milling differs markedly across countries. Milling in Zambia appears relatively competitive with 20 large scale millers, 27 medium scale and 31 small scale millers.⁴¹ Details of the largest millers are given in Table 5). By comparison, in Malawi it appears highly concentrated when we consider the larger-scale milling of refined maize flour (Table 6), although there is also substantial small-scale and informal milling at the community level. In Zimbabwe, there is a large number of rivals although some are substantially larger than others which are localized small and medium scale suppliers (Table 7).⁴²

Table 5: Main maize millers in Zambia

Company	Activity	Location /details
National Milling Corporation (owned by Seaboard, which operates 19 mills across Africa including Unga group in Kenya)	Breakfast and roller meal, flour; animal feed	Lusaka Invested in an ultra-modern US\$37.5mn mill Seaboard operates in ESA
Cargill	Maize milling (also cotton ginning)	Chipata, east Zambia

³⁹ See price tracker 7

⁴⁰ See price tracker 7

⁴¹ Submission of CCPC, 2 February 2022. See also <https://www.foodbusinessafrica.com/country-focus-grains-and-milling-industry-in-zambia/>

⁴² Note, we have not been provided with detailed data on Kenya, Uganda, or Tanzania.



Zambeef	Irrigated farming of maize, soybeans, wheat; grain storage; maize and wheat flour milling; animal feed; beef, chicken	Lusaka Operates across Zambia
A P G Milling Company	Maize flour milling	Mongu, west Zambia
Antelope Wholesale Merchants Co. Ltd (Kaldis Family)	Maize and wheat flour milling; animal feed	Luanshya, Copperbelt province
Star Milling	Maize milling	Lusaka
Chimanga Changa Ltd	Maize flour milling	Ndola, Copperbelt province It is under business rescue
Jamas Milling Company	Maize flour milling	Kitwe, Copperbelt province
Chat Milling	Maize flour milling	Lusaka
Simba Milling Limited	Maize flour milling; animal feed	Lusaka
Pembe Flour Mills Ltd	Maize and wheat flour milling; animal feed	Lusaka
Ghiradi	Maize flour milling	Lusaka
Chimisoro Milling Company Limited	Maize flour milling	Kapiri Mposhi, Central province
Isanya (Zambia Isanya Estates)	Maize flour milling	Northern province
Mansa Impala Milling Company	Maize flour milling	Luapula province

Source: Compiled by authors, including from information from authorities

Table 6. Main maize millers in Malawi

Company	Activity	Location /details
Bakhresa Grain Milling (BGM) Malawi Ltd	Maize Flour, Maize Bran & Rice Transportation, logistics, storage; diversified food products, beverages	Blantyre Acquired parastatal Grain and Milling Company in 2010 Operates across ESA
Rab Processors Ltd	Grain trading and milling, agro-food processing; Maize-meal and corn-soya blend	Blantyre Rab Group also operates in ESA
Export Trading Company Malawi	Fertilizer, maize and soybean milling	Blantyre Part of ETG group which operates in ESA

Source: Compiled by authors

Table 7. Maize millers in Zimbabwe

Company	Activity	Location /details
National Foods Holdings Ltd	Maize and wheat milling, animal feeds, edible oils, margarine, rice among other food products and soap	Harare, Bulawayo, Mutare Distributes across Zimbabwe
Blue Ribbon Foods (Bakhresa)	Maize and wheat milling, poultry feed	Harare, Bulawayo Distributes across Zimbabwe

		Part of Bakhresa Group with operations in ESA
Delta Corporation ⁴³	Beverages manufacturing (carbonated drinks, traditional beer, clear beer and non-alcoholic beverages) with investments production of cordials and juice drinks, wines and spirits	Harare, Mutare, Masvingo, Gweru, Kwekwe, Bulawayo Distributes across Zimbabwe A subsidiary of SABMiller of South Africa
Victoria Foods	Maize milling	Harare, Gweru Distributes across the country
Parrogate Zimbabwe (ETG)	Maize milling, cotton ginning, oil processing	Harare, Checheche (south-eastern part of the country), Glendale Formed Pure Oil Industries through joint-venture with ETG Vamara, with operations in ESA
Small and medium local millers		
AlphaGrain t/a Drotsky Pvt Ltd	Maize and wheat milling	Harare & local area
Shumba Milling	Maize milling	Harare & local area
Premier Milling	Maize milling	Harare & local area
Gwai Millers	Maize milling	Harare & local area
Simboti Millers	Maize milling	Harare & local area
Makonde Industries	Maize milling	Harare & local area
Maize for Africa	Maize milling	Ruwa local area market
Manyame Milling	Maize milling	Marondera local area market
Ilanga Foods	Maize milling	Bulawayo and distributes in Matabeleland provinces
Rainbow Foods	Maize milling	Bulawayo and distributes in Matabeleland provinces
Basic Foods	Maize milling	Bulawayo and distributes in Matabeleland provinces
Multifoods Milling Company	Maize milling	Bulawayo and distributes in Matabeleland provinces
Zvikuru Milling	Maize milling	Kwekwe & Midlands province
Porusingazi Milling	Maize milling	Mutare & Manicaland province
Pentland Milling	Maize milling	Gweru & Midlands province
Thendele Foods Milling	Maize milling	Tsholotsho & local area
Maduke Milling Company	Maize milling	Tsholotsho & local area
Mavako Investments	Maize milling	Lupane & local area
Distinct Millers	Maize milling	Beitbridge & local area
Mangwana Milling Company	Maize milling	Plumtree & local area
Adult Millers	Maize milling	Bindura & local area
Mapunga Foods	Maize milling	Bindura & local area
Makonde Milling Company	Maize milling	Mhangura & local area
Macsherp Milling Company	Maize milling	Kadoma & local area
Tsetseka Milling Company	Maize milling	Chegutu & local area

⁴³ Delta Corporation mainly purchases and mills maize grain for its traditional beer and non-alcoholic beverages production purposes.

Norton Millers	Maize milling	Norton a& local area
Makondo Millers	Maize milling	Chiredzi & local area
ZPN Milling Company	Maize milling	Mvuma & local area
Muushawasha Foods	Maize milling	Masvingo & local area
Big Six Millers	Maize milling	Mwenezi & local area

Source: Compiled by authors

The high maize flour prices in Malawi alongside low maize prices, given high levels of concentration raises concerns about concentration and warrants investigation. While regional competition would normally be expected to discipline prices in Malawi, the fortification requirement in Malawi impedes competition from imports from countries where fortification is not taking place.

The three main processors in Malawi are all regional multinational companies. The Bakhresa Group has significant interests across the region and dominates the maize milling and processing markets in Malawi, together with Rab Processors, both located in the Limbe area of Blantyre, and the Export Trading Company Malawi. These groups have expanded through mergers which means they have multiple contacts across countries and markets and are integrated into transport and logistics.

The Bakhresa group is described briefly below. We review ETG in section 9.3. Rab Processors Ltd. is the umbrella company for eight brands of products including unprocessed and processed agricultural commodities and non-food household items.⁴⁴ Its agro-processed commodities include milk powder, tea bags, peanut butter, nutritional supplement goods and salt. Its locally grown non-processed food products are focused on maize, groundnuts, rice and various types of beans of which 15% are for the export market.

Case study of merger evaluation and regional concentration: the Bakhresa/ Blue Ribbon Foods merger 2015 (Zimbabwe CTC)

The Bakhresa Group (Tanzania) took control of Zimbabwe’s Blue Ribbon Foods in 2015 via creating a wholly-owned Zimbabwe subsidiary, Bakhresa Holdings.⁴⁵ Blue Ribbon foods is engaged in milling to produce maize and wheat flour (among other products). At the product level, there is an overlap with Bakhresa which is also engaged in milling wheat and maize in other countries in the region.

The Bakhresa Group is organized under the holding company Said Salim Bakhresa & Company Limited, Tanzania (SSB). Bakhresa opened its first grainmill in 1973 to supply wheat flour for its own bakery, and other bakeries and subsequently has grown into one of Africa’s largest business groups with interests across food and agro-processing. Bakhresa is involved in milling activities, producing wheat flour and maize meal, with two major mills in Tanzania - the Kipawa Flour Mill and Mzizima Flour mill, built in 1986 and 1999 respectively. As well as bakeries, it is involved in the manufacturing of other foods (chocolates, carbonated drinks, ice cream, fruit processing), and packaging materials (polypropylene bags, plastic bags, and printing services). The group has also established a logistics subsidiary for road transport to support its grain milling business, followed by a container depot

⁴⁴ <https://saiia.org.za/saiia-toolkit/rab-processors-ltd/>

⁴⁵ <https://businesstimes.co.zw/blue-ribbon-abandons-regional-forays/#:~:text=Tanzanian%20milling%20giant%2C%20Bakhresa%20Group,revive%20the%20Zimbabwean%20milling%20company.>

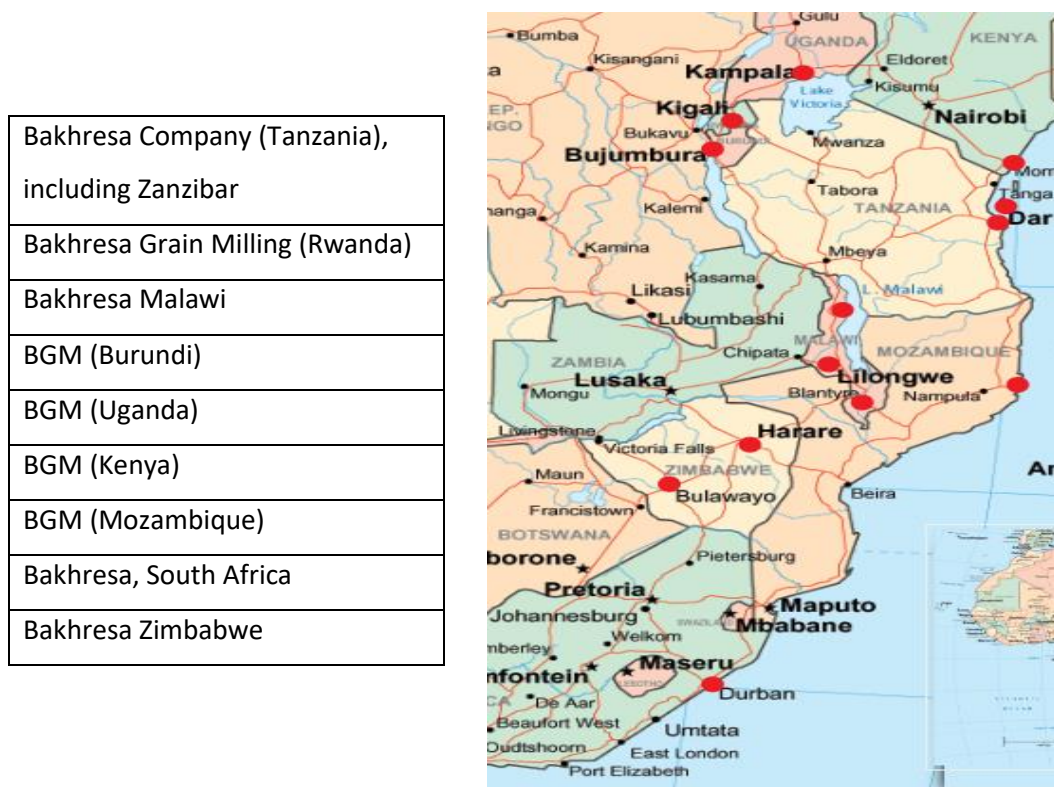


subsidiary, a media entity, and a ferry business, which all supported the core activities of the group (Esho and Verhoef, 2020).

Blue Ribbon marketed maize meal under three brands i.e. Chibataura, Ngwerewere and Amandla, along with various specifications of wheat flour. Bran is also produced as a by-product of wheat flour. From the publicly available information, the relevant product markets for the merger included those of storage, wheat and maize milling and bread baking, given the overlap in activities of both Blue Ribbon and Bakhresa.

In milling ETG has established an extensive footprint across Eastern and Southern Africa (Figure 31). The acquisition of Blue Ribbon Foods was part of the expansion. The firms overlap in terms of products, however, if we view the geographic markets as national then they were not rivals, and it appears that the merger was assessed on this basis by the Zimbabwe CTC. The firms could have been competing in cross-border markets, for example, if each sold into Zambia, or if Bakhresa sold into Zimbabwe from a neighbouring country. The firms could also have been *potential* competitors if Bakhresa had planned to enter Zimbabwe as a greenfield investor if it had not bought Blue Ribbon. The extensive regional footprint of Bakhresa further highlights the importance of considering regional aspects of its acquisitions.

Figure 31. Bakhresa Regional Milling Presence



Source: Compiled by authors

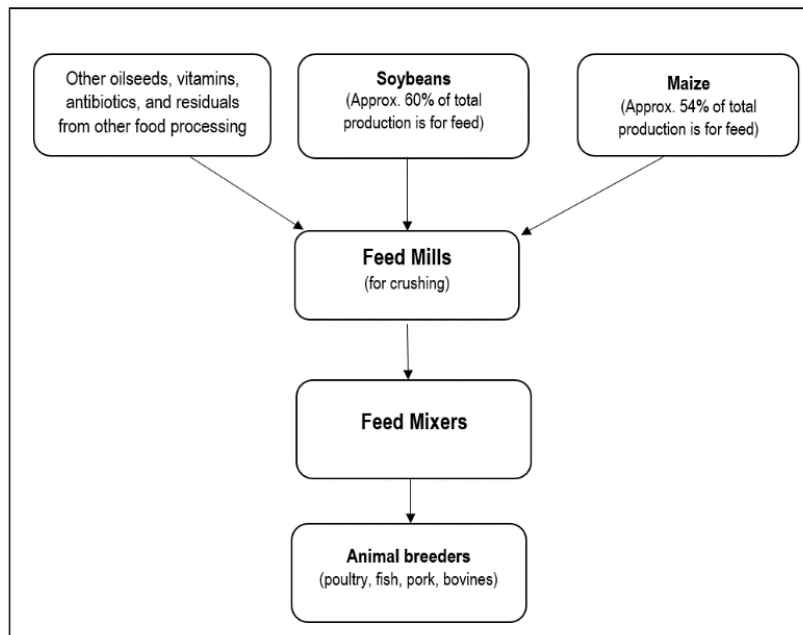
9.3. Concentration in soybean trading and processing

Mapping out the soybean to animal feed value chain



The animal feed value chain is key to understanding soybean as the 'green gold' being the key source of protein in much of animal feed around the world. It is thus crucial to understand the different levels of the feed value chain. At the upstream level, maize, soybeans, vitamins and other products are sourced by feed mills as the primary ingredients. The ingredients are then processed into animal feed. Typically, maize is the main energy ingredient for animal feed whilst soybeans are a source of protein. Feed typically, by weight, comprises 60% of maize and 25-30% of soya. As soybean prices are roughly double maize prices, in value terms they are roughly the same in the composition of feed.

Figure 32: Animal feed value chain



Source: derived from Goga & Bosiu, 2019; Ncube et al., 2017

The soybean processing market in the region has five main types of participants (Hichaambwa et al., 2014):

1. Integrated feed manufacturers who produce animal feed and are often vertically integrated into livestock production. Examples are Zamanita (Zambia), CP Feeds (Malawi) and National Foods (Zimbabwe);
2. Producers of cooking oil (refined and crude) and soy cake as co-products (larger proportion of soybean primary commercial processing), which is either sold or processed e.g., Mt. Meru (Tanzania);
3. Oil producers that refine edible oils are often involved in oilseed crushing, and trade soy cake to other players;
4. Livestock feed producers who are not vertically integrated; and
5. Processors of human foods directly.

Animal feed has driven investments in soybean production and processing. To appreciate the importance of soybean as a crop, one must understand its links into the downstream levels of the value chains such as poultry and fish farming. Competitiveness in the poultry industry is largely

dependent on access to critical inputs, namely, animal feed and day-old chicks (Ncube, Roberts and Zengeni, 2017). Animal feed is by far the largest single cost in producing broiler chickens, constituting around 70% of the cost of poultry production (Ravindran, 2010; Goga and Bosiu, 2019).

Soybeans can be processed in a variety of ways, depending on the required products. Table 8 outlines the main processing methods used to produce animal feed.

Table 8. Soybean processing methods

Process	Main products	Use	Description
Crushing	Full fat soy cake	Animal feed ingredient	Crushing soybean into cake without removing the oil
Chemical/solvent extraction	Oil Low fat soy meal	Oil for human consumption, meal for animal feed; requires very high volumes to be economical	Crushing beans into thin flakes, then percolating with hexane solvent to extract oil from the meal/cake
Pressing (Mechanical Extraction)	Oil Low fat soy meal	Oil for human consumption, meal for animal feed; economical at low to medium volumes	Process involves the use of continuous screw presses to expel oil from the beans

Source: Derived from Opperman and Varia (2011)

As most soybeans are processed to produce oil and low fat cake or meal, mechanical and solvent extraction are the main processing methods, with solvent extraction becoming increasingly used due to its lower cost when processing large volumes. In solvent extraction, the soybeans are cracked to remove the hull and then rolled into full fat flakes. The rolling process disrupts the oil cells, facilitating solvent extraction of the oil. After the oil has been extracted, the solvent is removed, and the flakes are dried, creating defatted soy flakes. Most of the defatted soy flakes are further processed into soybean meal for animal feed. The sections below highlight key players along the soybean to poultry value chain in selected ESA countries.

Concentration in soybean trading and processing

Soybean trading appears to be considerably more concentrated than for maize. ETG is the largest non-GM soybean originator (that is, excluding South Africa which has GM soybean) in Africa. According to its own data, ETG distributes an annual tonnage exceeding 500 000 tonnes which, given the production levels, means that ETG trades more than half of all the soybeans from Malawi, Zambia, Tanzania and Uganda, among other countries.⁴⁶ Afgri and NWK are also engaged in soybean trading.

The concentration in sourcing and trading in soybeans is linked to concentration in the main processed soybean markets, in the form of crushing to edible oil and oilcake for feed, and milling to soymeal for feed. These levels of concentration have important implications when assessing mergers, such as the ETG processing mergers considered below.

⁴⁶ <https://www.etgworld.com/soybean.html>



In Malawi the ten processors split into edible oil and primary feed producers, with only four firms processing soybean into edible oils and ETG present in control of Seba Foods and Vamara (Table 9). It appears as if three other companies also have common shareholding meaning that, grouping these together, there are six competing groups. Of the animal feed and poultry producers two (CP Feeds and Protofeeds) are much larger than the others, while there are four large processors for oil and soy chunks. There have also been concerns raised in terms of the price of edible oils within the last year in Malawi, with explanations of high input costs (including that of soybean) being given by the Edible Cooking Oil Association of Malawi.⁴⁷

In Zambia, the main buyers include traders, animal feed producers and oil processors, namely ETG (including Parrogate and Seba Foods), NWK, Afgri, National Milling, Pembe, Mt Meru and Global Industries (Table 10).⁴⁸ Animal feed has been an important driver of soybean demand, with the main companies including Tiger Animal Feeds, Zamanita and Quantum Foods, which are all subsidiaries of international poultry producers Astral Foods, Cargill/ETG⁴⁹ and Pioneer Foods (see also Samboko et al., 2018). Some of these companies also produce vegetable oils such as ETG's Zamanita business which was acquired from Cargill. In Zimbabwe animal feed producers dominate the processors of soybeans (Table 11).

Table 9. Main soybean processors in Malawi

Company (ownership)	Activities	Location /details
Seba Foods (Export Trading Group)	Soy chunks for human consumption	Lilongwe and distributes across Malawi Operates in ESA
Vamara (Export Trading Group)	Soy chunks for human consumption, edible oils	Lilongwe and distributes across Malawi ETG Vamara operates in ESA
Rab Processors	Soy chunks for humans; edible oils; soybeans, sugar beans, nuts, other legumes	Blantyre and distributes across Malawi Rab Group operate in ESA
Mount Meru Millers (Mount Meru Group)	Edible oils; soaps; seeds, storage and trading	Lilongwe. Operations in Rwanda, Tanzania, Uganda and Zambia.
Proto Feeds (Kelfoods)	Animal feed	Blantyre, with distribution depots in Lilongwe and Mzuzu; distributes throughout Malawi
CP Feeds, Central Poultry (Karim Brothers)	Animal feed, livestock breeding, egg production	Lilongwe and distributes across Malawi
Capital Oil Refining Inds (Karim Brothers)	Edible oils	Blantyre and distributes across Malawi
Sunseed Oils (Karim Brothers)	Edible oils	Lilongwe and distributes across Malawi and regional markets bordering Malawi.
Charles Stewart & Lenzie Mills (family)	Animal feed and poultry	Blantyre, Hy-Line layers breeding stock, Ross broilers, stock feeds

⁴⁷ <https://times.mw/cooking-oil-price-hike-on-the-cards/>

⁴⁸ See submission of CCPC, 2 February 2022.

⁴⁹ Cargill acquired Zamanita in 2015, however, it ceased operating in 2018 and ETG acquired it from Cargill in 2019 and recommissioned the plant.

Compiled by authors including from interviews

Table 10. Main soybean processors Zambia

Company (ownership)	Activities	Location /details
Novatek (Zambeef)	Animal feed, beef, poultry, pork, dairy	Mpongwe (Copperbelt province) and distributes across Zambia Operates in DRC and Zimbabwe
Tiger Animal Feeds (Astral Foods)	Animal feed	Lusaka, and distributes across Zambia Exports regionally DRC, Tanzania, Malawi, Zimbabwe and Namibia Astral Foods also operates in South Africa, Swaziland and Mozambique
Zamanita (ETG)	Animal feed, edible oils	Lusaka, and across Zambia Exports to DRC, Malawi, Zimbabwe ETG also in Zimbabwe, Malawi, South Africa and Kenya
Niraj Oils	Edible oils	Kalulushi, Copperbelt province and also North-Western and Luapula provinces Exports to DRC
Unified Chemicals	Edible oils, soaps	Lusaka and distributes across Zambia Exports within the region
Meadow/Quality Feeds ⁵⁰	Animal feed	Distributes across Zambia
National Milling Corporation (Seaboard)	Day old chicks, animal feed, flour and bread	Lusaka, and distributes across Zambia Seaboard operates in Uganda, Kenya, Mozambique, Botswana, Lesotho, South Africa.
Emman Farming Enterprises	Animal feed, edible oils, plastic bottles	Luanshya, Copperbelt province and distributes across Zambia
Hi-Pro Foods	Animal feed, edible oils and cereals	Lusaka, and distributes across Zambia
Olympic Stock Feeds	Animal feed	Ndola, Copperbelt province, and Lusaka Exports to DRC
Nutrifeed (Ross Africa) (CBH)	Animal feed and poultry	Lusaka and distributes across Zambia CBH also operates in South Africa, Swaziland, Lesotho, Namibia
Quantum Foods (Pioneer Foods)	Animal feed, eggs, poultry	Lusaka and the Copperbelt province Distributes across Zambia

⁵⁰ Meadow Feed Zambia is not to be confused with Meadow Feed South Africa which is part of Astral. Meadow Feed Zambia was created by ex-members of staff of Meadow Feed South Africa who claimed the rights to the name in Zambia. When Meadow Feed South Africa decided to start a branch in Zambia, they had to change their name to Tiger Feeds, which was the company that Meadow Feeds and Astral had spun-off from in South Africa.

		Operates in South Africa, Mozambique and Uganda
Pembe Milling	Animal feed, edible oils, maize, and baking flour	Lusaka and distributes across Zambia mainly in the Copperbelt Province Operates in Kenya, Rwanda, Tanzania and Uganda
Mount Meru Millers (Mount Meru Group)	Edible oils; soaps; seeds procurement, storage and trading	Lusaka and distributes across Zambia Operations in Malawi, Rwanda, Tanzania and Uganda
Simba Milling	Animal feed; maize flour	Lusaka and distributes across Zambia

Source: Compiled by authors

Table 11. Main soybean processors in Zimbabwe

Company (ownership)	Activity	Location /details
National Foods Ltd (Innscor Africa Ltd)	Animal, poultry & other feeds, maize meal, flour, edible oils, margarine, rice among other food products and soap	Harare, Bulawayo and Mutare Distributes across Zimbabwe
Profeeds (Ashram Investments, Innscor Africa, ProGroup)	Poultry feed	Harare and distributes across Zimbabwe
Feedmix (John Taylor; Alexander Kirkman)	Poultry feed	Harare and distributes across Zimbabwe
Novatek (Zambeef)	Poultry feed	Harare and distributes across Zimbabwe
Manyame Milling (Edurate Investments Pvt Ltd)	Poultry feed	Marondera, Mashonaland East province Mainly service its provincial market
Premier Milling (Croco Holdings)	Poultry feed	Harare, and surrounding
Capital Foods (Powerful Grand Industries Pvt Ltd)	Animal feed, ingredients and additives, veterinary products, general livestock consultancy	Ruwa, Harare and distributes across Zimbabwe
Blue Ribbon Foods (Bakhresa Group)	Poultry feed, maize meal, flour	Harare and distributes across Zimbabwe
Fivet Animal Health (Tim Skinner)	Poultry feed, veterinary services and technical advisory	Harare and distributes across Zimbabwe
Hyperfeeds (Hyperfeeds Animal Health Pvt Ltd)	Poultry feed	Harare and distributes across Zimbabwe
Hamara Feeds (Hamara Group)	Poultry feed	Bulawayo and distributes across the southern parts of Zimbabwe
Agrifoods	Animal feed	Harare and Bulawayo

(CFI Holdings)		Distributes across Zimbabwe
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Source: Compiled by authors

We note also that the Competition Authority of Kenya (CAK) has conducted investigations into animal feeds in 2019. A number of issues were highlighted including vertical integration, the role of associations, exclusive distribution arrangements and very few large-scale producers.⁵¹

Merger evaluation and concentration in soybeans to animal feed: ETG mergers and Zambeef merger

The Export Trading Group (ETG) is a diversified agricultural conglomerate which owns and manages a vertically integrated supply chain across Africa, South East Asia, the Middle East, Europe and the Americas.⁵² It is the largest agricultural commodity supply chain manager in Africa, with vertically integrated supply chain operations including a reported 120 processing plants and 460 warehouses globally.⁵³ It is present in 48 countries through its subsidiaries which are involved in various activities including the origination, procurement, warehousing, and logistics of agricultural commodities as well as processing of consumer products. Its product portfolio is diversified across agro-commodities, such as cashews, oilseeds, sugar, coffee, pulses, wheat, rice, maize, sesame seeds and fertilizer.

The company is organized into the following 5 business areas:

- i. Exchange Trades which is primarily the trading of maize, wheat, oilseeds, sugar and coffee over commodity exchanges across the world, as well as sourcing commodities across Africa;
- ii. Cash Trades which trades in pulses, sesame, cashew and rice, procuring from the major producing areas in Africa, Canada, Australia, China and South East Asia;
- iii. Agri-Inputs with a major focus on fertilizer distribution to African farmers along the same ETG supply chain that transports their commodities outwards, along with other farming inputs and agronomic services to farmers while purchasing their agricultural outputs;
- iv. Warehousing and Logistics which operates and manages several multi-sized warehouses, depots for containerized cargo at strategic ports, including Dar es Salaam, Mombasa, Beira and Durban, and primary processing facilities and trucking operations; and,

⁵¹ These include Unga Farmcare, owned by USA company Seaboard, and Pembe Feeds.

⁵² <https://www.etgworld.com/>

⁵³ <https://www.fmo.nl/project-detail/59075>

- v. Fast Moving Consumer Goods (through Vamara), produces several consumer branded products across a number of key East, Central and Southern African countries and selected international markets from manufacturing and/or processing plants in Africa.⁵⁴

We map ETG’s regional presence along with the presence of two groups with which it has joined in the 2016 merger in Pure Oil Industries (see merger b below). These are the Inncor/Irvines/CobbAfrica⁵⁵ group of companies, and Tiger Brands, the largest food conglomerate in South Africa. ETG, as we show, has a very strong regional presence (Figure 33).

It has expanded through organic growth and a number of mergers and acquisitions. We highlight key mergers in ETG’s expansion in the region which point to some competition challenges and the important role of regional merger review, as is being undertaken by the CCC. We also consider a major merger in Zambia involving Zambeef which relates to the importance of animal feed in the soybean value chain.

Figure 33. ETG regional presence, with Inncor/Irvines/CobbAfrica & Tiger Brands

ETG entities
ETG Inputs (Djibouti) Limited FZE
ETG Agro Inputs Congo
Foodcom and Liquifoods (Eswatini)
ETG Inputs Madagascar SARLU
ETC (Malawi) Ltd
ETG Commodities Ltd (Mauritius)
ETC (Uganda) Ltd
ETC (Rwanda) Ltd
ETG Burundi
Global Agency Ltd (Seychelles)
ETG Zambia
ETG DRC
IETC Zimbabwe Ltd
ETC Kenya Ltd
ETG Agro Pty Ltd (South Africa)
ETG Logistics Botswana

⁵⁴ Vamara’s product portfolio include: animal nutrition; flour and instant breakfast cereals; long-life dairy; edible oils; laundry soap, powder and detergents; maize meal; pasta, noodles and rice; pulses; savoury snacks; spreads; canned ingredients and condiments; extruded soya pieces; and powdered beverages.

⁵⁵ Cobb Africa is owned by Irvines and has the licence for the Cobb breed across much of Africa, albeit not in South Africa (where it is held by RCL Foods) or Zambia (where it is held by Hybrid), see <https://www.cobbafrica.com/>



ETG Logistics Namibia



Source: compiled by authors

a. ETG/Vamara and Parrogate Zimbabwe merger in 2013 (Zimbabwe, CTC)

The transaction brought together key business groups with operations stretching across the region and across products. The transaction itself took the form of a joint venture between ETG/Vamara and Parrogate Zimbabwe to create Pure Oil Industries (POI), which was incorporated in Zimbabwe in 2012.⁵⁶ Vamara's product portfolio includes: animal nutrition; flour and instant breakfast cereals, long-life dairy, edible oils and maize meal, amongst other consumer goods. Vamara owns manufacturing and/processing plants in Ethiopia, Kenya, Malawi, Uganda, Zambia and Zimbabwe.

Parrogate Zimbabwe was a company incorporated in Zimbabwe and part of the Parrogate Group of India with operations in Malawi, Zambia and Zimbabwe. The group was a global player in cotton, edible oils, and maize and fertilizer industries and expanded into grain trading and milling, real estate development, commercial farming and Ferro alloys. Parrogate started operating in Zimbabwe in 2003 when it installed the Checheche Plant, followed by the Glendale Plant in 2006, both for

⁵⁶ <https://www.pureoils.com/>

cotton ginning and oil processing. In 2009, a maize milling plant was developed and in 2013, the company expanded the Harare Plant with a multi-seed oil complex for oil crushing and refining. Further expansions of the Harare Plant were done in 2014 on the maize milling side to include the snack food production line. In capacity terms, Parrogate Zimbabwe's operations were as follows: cotton ginning – 50000MT annually; oil refinery and packing – 50000MT annually; oil seed crushing – 100000MT annually; maize milling – 50000MT annually; and snack food – 1500MT annually. The company also supports 10000 farmers in Zimbabwe through its input scheme.

Pure Oil Industries is a processor of edible oils such as soybean oil, palm oil, sunflower oil, canola oil, margarine and bakers' fat. The relevant market was identified as the production and distribution of edible oils, soap and fats in the Common Market. Parrogate and ETG/Vamara also both produced maize meal and edible oils prior to the merger in a number of countries in the region, even while the merger was assessed by the Zimbabwe CTC.

b. National Foods Ltd and Pure Oil Industries merger in 2016 (Zimbabwe, CTC)

The transaction involved the acquisition of 40% stake by National Foods Ltd in Pure Oil Industries Ltd. It was assessed by the CTC.

The merger brought together the largest food business in Zimbabwe, Innscor (which also controls Irvines), and the largest business in South Africa, Tiger Brands (which are the two major shareholders in National Foods Ltd Zimbabwe), together with ETG/Vamara and Parrogate.⁵⁷ Tiger Brands has direct and indirect interests in international food businesses in Cameroon, Chile, Kenya, Mozambique, Nigeria, Zambia and Zimbabwe. National Foods manufactures and marketing foodstuffs and stock feeds in Zimbabwe. Its range of basic foods products include maize meal, maize based cereal, flour, cooking oil, margarine, rice, salt, snacks, biscuits, pasta, sugar beans, baked beans, popcorn, as well as soap and a full range of animal feed. National Foods has manufacturing sites in Harare, Bulawayo and Mutare with a combined capacity of producing 600000 tonnes of corn annually, 264000 tonnes of wheat flour and to process 480000 tonnes of stock feeds all of which is distributed throughout Zimbabwe.⁵⁸

The merger involved companies with multi-market contacts across products and geographies, as illustrated in Figure 8 above.

c. ETG Parrogate FCZ and Zamanita merger in 2019 (Zambia, CCPC)

The transaction involved ETG Parrogate FCZ acquiring the entire shareholding of Cargill Holdings B.V. in Zamanita. It represented a substantial consolidation in Zambia, evaluated by the CCPC, and reflected the regional network of relationships.

ETG Parrogate FCZ is a company incorporated in Zambia. It is a subsidiary of ETG Parrogate which is involved in cotton ginning, maize milling, ferro alloys, oil extraction and refining; and snacks

⁵⁷ <https://nationalfoods.co.zw/>. Innscor Africa Ltd held 37.73% in National Foods Ltd and Tiger Brands held 37.45%.

⁵⁸ <https://www.world-grain.com/articles/557-tiger-brands-increases-stake-in-national-foods#:~:text=National%20Foods%20has%20the%20capacity,feeds%2C%20according%20to%20IH%20Securities>

manufacturing. Prior to this merger, the journey of Parrogate in Zambia started in 2006 with the acquisition of Kalomo & Sinda Ginning Plant, followed by the setting up of an oil mill in Sinda 2007. In 2007, ETG acquired Mpongwe Farm, Zambia – one of the largest established cereal farms in Africa.⁵⁹ Parrogate upgraded the Kalomo Ginning plant as well as the installation of a new oil plant. Thereafter, Parrogate made an additional investment by setting up a cotton ginning & oil mill as well as SAFAL (a ferroalloy plant) in Mwembeshi in 2010.

In 2014, Parrogate then set up a continuous oil refinery in Lusaka under the Zamgold brand. Parrogate Zambia supports more than 30000 local farmers in cotton, maize and soybean production across the country. In the Common Market, ETG Parrogate has operations in Malawi, Zambia and Zimbabwe.

Zamanita is a company incorporated in Zambia. It is involved in oil seed crushing, manufacture edible oil and soya meal and importation of palm oil in Zambia. Zamanita is one of the largest edible oil and soya meal producers in Zambia that serves the domestic Zambian refined oils market and both domestic and export markets for soybean meal. Prior to this merger, Zamanita was 100% owned by Cargill Holdings BV, which had acquired it from Zambeef in 2015.⁶⁰

d. ETG Inputs Zambia Limited/ETG Inputs Zimbabwe (Private) Limited and Curechem Zambia Limited/Curechem Overseas (Private) Limited merger 2021 (CCC)

The transaction involved the proposed acquisition of Curechem Zambia Limited (“Curechem Zambia”) and Curechem Overseas (Private) Limited (“Curechem Overseas”), (together the “Target Undertakings”), by ETG Inputs Zambia Limited (“ETG Zambia”) and ETG Inputs Zimbabwe (Private) Limited (“ETG Zimbabwe”).

ETG Zambia and ETG Zimbabwe are companies respectively incorporated in Zambia and Zimbabwe as subsidiaries of ETG. They are primarily engaged in importing, exporting, processing, blending, warehousing, bagging, trading & distribution, production of fertilizers, agri-inputs, agro chemicals, agricultural equipment, seeds, and related chemicals. ETG in South Africa also acquired major regional fertilizer suppliers, Kynoch and Profert.

Curechem Zambia and Curechem Overseas, were companies incorporated in Zambia and Zimbabwe, respectively. They were both engaged in the business of importing and supplying agro chemicals, industrial raw material as well as chemicals used in the mining process in Zambia and Zimbabwe. Both entities supplied inputs to farmers including cotton contractors, tobacco contractors as well as sugarcane farmers. They also supplied mining reagents to both large- and small-scale miners, and industrial chemicals to the manufacturing industries from detergents, cosmetics, and food products sector as well as water treatment chemicals and those used in paint manufacturing. In the Common Market, these entities were respectively active in Zambia and Zimbabwe.

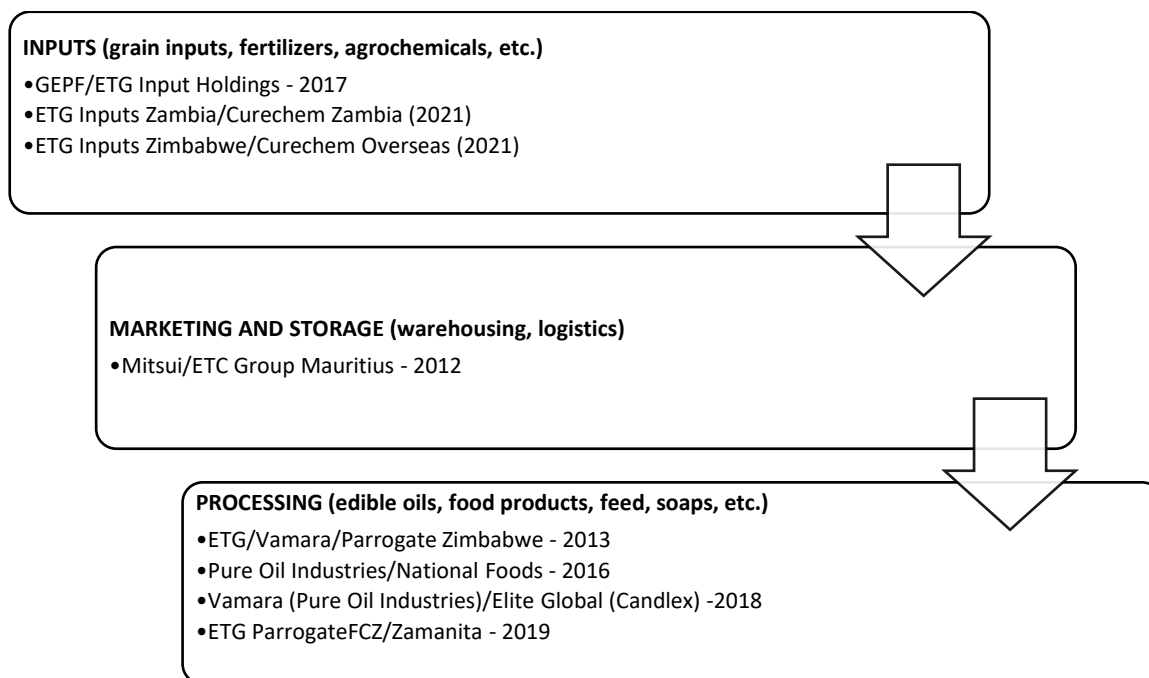
The CCC defined the relevant market as the production and distribution of agricultural inputs and industrial chemicals in the Common Market.

⁵⁹https://landmatrix.org/media/uploads/etgworldcomwp-contentfiles_mfetgcpmarketingdigitalfapdf.pdf

⁶⁰<https://www.etgworld.com/zamanita.html>

The review helps us to understand the vertical and horizontal integration along the value chain and how the mergers have contributed to this (Figure 34).

Figure 34. Categories of ETG Mergers along the grain value chain



Source: Authors' own compilation

Zambeef/Zam Chick and Zamhatch merger 2016 (CCC)

The transaction involved Zambeef acquiring Rainbow Farms Investment (RFI) 49% shareholding in Zam Chick and 51% shareholding in Zamhatch to become 100% shareholder in both Zam Chick and Zamhatch. RFI is an investment vehicle for RCL Foods, owners of Rainbow Chicken and had invested as a joint venture partner with Zambeef to expand the poultry business as it is one of the two largest poultry producers in South Africa and exemplifies the networks of relationships in poultry and feed across the region.

Zambeef⁶¹

Zambeef is a public company incorporated in Zambia and listed on the Lusaka Stock Exchange and AIM market of the London Stock Exchange. Zambeef is the largest vertically integrated food retailing brand in Zambia⁶², with operations in Ghana and Nigeria. Zambeef produces, supplies and distributes beef and beef products, pork, dairy and fish products. The entity has six beef abattoirs and three feedlots located throughout Zambia, with the capacity to slaughter 100,000 cattle and feedlot

⁶¹ <https://zambeefplc.com/business/cold-chain-food-products/>

⁶² <https://zambeefplc.com/>

24,000 grain-fed cattle per annum. They also have one of the largest piggeries, pig abattoirs and pork processing plants in Zambia, with the capacity to slaughter 100,000 pigs per annum.

Zam Chick and Zamhatch

Prior to the merger, Zam Chick and Zamhatch were a joint venture between Zambeef and RCL Foods (through Rainbow Farms Investment Proprietary) with RCL holding a 49% shareholding in Zam Chick and 51% in Zamhatch. The arrangement was that of Zamchick managing and operating Zambeef's broiler business in Zambia, including the broiler houses, chicken abattoir, and processing plant. Zam Chick was also operating Zamhatch, which was a breeding operation set up in 2013 to feed into the broiler production division of Zamchick.

The relevant markets here potentially included those of animal feed, poultry breeding and broiler production. The activities of the parties to the merger are however regional in nature. There are already a small number of major regional companies operating across southern Africa. These firms are led by Rainbow Chicken (which owns RFI as an investment firm) and Astral Foods, the two largest firms in South Africa, followed by CBH Holdings and Quantum Foods.

RCL Foods (through Rainbow Chicken) is integrated from breeding and feed production through to large scale abattoirs. In Zambia, the entry of South African firms into the poultry industry was co-ordinated and sequential (Ncube et al. 2017). Some of the firms, for instance Rainbow Chicken (through Zamhatch and Zamchick at the time), started by setting up animal feed operations before incorporating their breeding and broiler production operations. Rainbow Chicken's Novatek was set up in 2010 as part of the joint venture with Zambeef, followed by Zamhatch and Zamchick in 2013.

Some of the key benefits from these co-ordinated investments in Zambia (and in other parts of the region) include significant price reductions for both animal feed and day-old chicks. For example, day-old chicks in Zambia saw a 47 per cent decrease in price between 2012 and 2015. The fall in the Zambian price reflects the continued increases in competition and growth in scale in the poultry industry, which has been characterized by new investments in breeding by companies such as Rainbow Chicken's Zamhatch (Ncube et al., 2017).

While the expansion into these countries has been largely to meet domestic demand in the destination countries, some of the moves are clearly to take advantage of demand within the region. For example, Zamhatch and Novatek, Rainbow Chicken's subsidiaries in their partnership with Zambia's Zambeef, have invested in hatchery operations and an animal feed mill in the Copperbelt region of Zambia, which is near the border with the Democratic Republic of Congo (DRC). This strategic location will enable them to export day-old chicks and animal feed into DRC and Angola.

Sole ownership of the Zam Chick and Zamhatch operations by Zambeef also is not necessarily the removal of a potential competitor but may have significantly strengthened Zambeef's capabilities within Zambia but also in adjacent markets such as Angola and the DRC.

10. Policy and advocacy

Africa's food systems are fragile and urgently need to become more resilient (AGRA, 2021). This requires a combination of measures to increase production and value addition, improve productivity

and ensure sustainability. Government policies are required to stimulate investment, innovation and competition.

The UN Food Systems Summit set out an agenda for action, with appropriate policies and support for more resilient food systems. It is clear that effective competitive markets are central to this agenda, however, the current reality of markets with high levels of concentration at many levels, and the role for competition policy is not well understood (Clapp, 2021). The expansion of large-scale multinational trading firms has not necessarily led to more efficient markets, as we have demonstrated. There is an urgent need for an advocacy campaign to raise awareness of the issues and ensure measures are adopted that reinforce, rather than replace, competition and ensure wider participation by small and medium entrepreneurs, along with the investments in trading and logistics by large companies.

Countries in ESA have imposed a number of restrictions from time to time which have often exacerbated price volatility and undermined regional markets. In the report we also identified the need for complementary market supporting policies and regulations. We have identified further regulatory barriers to trade here which appear to reinforce market power. For example, the fortification requirement in Malawi may limit import competition in maize flour and enable local milling companies to have greater collective market power. Harmonization of fortification across countries, as is meant to be the case, would ensure more regional competition along with the healthier diets which the fortification aims to achieve.

A broad competition policy and advocacy agenda for resilient and sustainable regional integration needs to identify and motivate for a set of key priorities, as follows.

First, continued strengthening of regional competition enforcement with further increased capacity for the authority, along with effective working together of national authorities and the COMESA Competition Commission in merger review and cartel enforcement, and to advance the Tripartite process to ensure a more coherent regional regime. The ability to enforce requires resources and widespread support.

Second, effective policies to reduce barriers to entry and open-up markets to competitive rivalry by smaller businesses. This includes in important services such as trucking and storage, as well as inputs and processing. Lowering barriers to entry means tackling regulations which discriminate against smaller firms and protect incumbents, as well as providing development finance, advice to entrepreneurs, support for research, testing and standards, and access to important shared services such as warehouses and receipt systems to enable trading.

Third, trade policies which resist lobbying by special interest groups seeking to secure rents for themselves. Incumbents will always lobby for measures which support their interests while purporting to be in the national interest. The job of competition advocacy is to point to the harm, typically to consumers and to smaller producers, so that there is greater public awareness of the costs through the press and civil society groups.

Fourth, ongoing information gathering and analysis on market outcomes. The Market Observatory is a start in this. The pilot points to the importance of a more concerted and systematic approach to information gathering and assessment which can assist in prioritization of cases and inquiries.

Fifth, advocacy and public awareness including through a mapping of key stakeholders in food and agriculture markets in the region and continent, and the best means of communication and engagement with them. Our review indicates that the extensive work being done on food and agriculture challenges in Africa gives too little weight to competition issues. The assessments being done often fall into the trap of assuming markets will be efficient if restrictions are removed and not understanding the risks of concentration and market power. There are many different forums through which researchers and policymakers can be proactively engaged.

11. Enforcement - cartels

Cartels are highly likely to undermine regional integration and the gains from trade, which rest on competition across borders. They can do this through dividing markets geographically and agreeing not to compete on price and other terms. A major enforcement challenge facing any regional competition authority is therefore how to identify likely cartels which are operating across borders. This is made more challenging by the fact that data are collected nationally and, in the case of wholesale or producer prices, may not be collected on a systematic basis at all. Arrangements between the companies for geographic market division may also be bolstered by barriers to trade that companies have lobbied for, including by appealing to national interests.

In this section, we reflect on the review of pricing information at the producer/wholesale and consumer levels, as well as the information on concentration within and across countries. The production and trade flow data are also important for understanding the supply and demand balances within and across borders. We focus mainly on enforcement regarding cartel conduct although there may also be abuse of dominance and restrictive vertical agreements operating at the regional level which require the authority's attention.

Only a regional view can reveal the ways in which multinational companies are able to configure collusive arrangements in Eastern and Southern Africa. The CCC thus has a crucial role in ensuring that integrated markets function optimally and without distortion from collusive agreements and to enforce against cartels. This is also to the benefit of countries without national authorities (OECD, 2012; 2013).

There are well-understood methodologies for structural and behavioural screening for cartels.⁶³ Applying these requires ongoing monitoring of markets for priority goods and services which enables a scoping of areas for deeper assessment in a phased approach which needs to work with national authorities. Staple foods cover products which have been cartelised in many countries around the world. They are also products where prices have been found to be very high in African cities even where production costs would appear to be low, and which clearly impact heavily on low-income households.

The pilot points to where the market observatory can play an important role in collating data on market outcomes and market structures *across* countries which indicate where market outcomes do not appear to be in line with what would be expected under conditions of effective competition. Structural screening identifies *particular structural features or traits* that are associated with an

⁶³ See OECD, 2013; Harrington (2007); Crede (2019); Imhof (2019), Oxera 2013; Marshall and Marx, 2012; Petit, 2012; Grout and Sonderegger (2005); Roberts, 2020.

increased likelihood of collusion occurring within a market. These features include higher level of concentration (and fewer firms), relatively homogenous products, buyer dispersion, high barriers to entry, multi-market contacts, high levels of cross-ownership and a history of trade associations. These features imply a greater likelihood of reaching an understanding and of firms being able to monitor compliance with it.

While an assessment of regional concentration can start by drawing together information on the number and rough size of suppliers within countries, it should also seek to understand the extent to which consumers should be able to turn to suppliers across geographic borders, including transport costs and trade barriers. This needs to include assessment of the main sources of production and consumption in geographic space and be mindful not to take low trade flows as a sign of national (and not regional) markets when the low trade can itself be due to regional cartel arrangements. Closely related to assessing concentration is mapping the presence of common regional suppliers and links between firms across countries through various relationships. There may be multi-market contacts which increases the likelihood of collusion (World Bank, 2016).

We see extensive multi-market contacts and webs of corporate relationships in trading and processing of maize and soybeans, as well as in the supply of inputs and in further levels of the value chain in animal feed, poultry and vegetable oil. There are also trade associations in place, which have often been found to facilitate collusion.

An assessment of pricing is critical for behavioural screening. Price screens can be applied which pick-up markers such as stable prices, the distribution of prices and price changes, and comparisons to pricing patterns in different geographic areas, for other similar products and in different time periods. In addition, structural breaks may indicate the start or end of a cartel. A low pass-through from costs to prices can also raise questions. The latter is something which the observatory is able to pick-up from tracking prices at different levels of the value chains.

Pricing patterns and trade flows – producer grain prices

Trade flows should equalise prices after taking account of transport and related costs. Trade means that countries which are scarce in a commodity can benefit from lower-priced imports, improving consumer welfare. The country with a comparative advantage in production is able to benefit from exporting the goods and producers have wider markets and better prices. If the trade flows and prices are not in line with this expectation then the gains from regional integration are undermined and there may be cause for concern regarding anti-competitive conduct. We have identified situations where this is the case.

The comparison of the producer prices against the context of production patterns and trade flows indicates that **maize price** differences after controlling for transport costs have been large into Nairobi (from Uganda, Malawi and Zambia). A recent paper also confirms major market power concerns relating to traders in Kenya (Bergquist and Dinerstein, 2020). It is expensive to be a consumer in Nairobi.

Comparisons of other pairs of supply and demand locations of maize indicate markets working much better. Prices in Malawi, Tanzania and Zambia have been around or lower than US\$200/t for much

of the past year as consumer benefit from trade from areas with abundant production (Figure 13). Prices were substantially lower than in early 2020 and indeed than in previous years.

The **soybean price** movements are also striking, although the data is much patchier here until the observatory effort from mid-2021 (Figure 16). The excess margins over transport costs from producing areas into both Dar es Salaam and Nairobi appear to have been very large at times (and there have not been import restrictions in place).⁶⁴ Table A1 identifies average excess margins over the 2021 year of US\$470/t and US\$521/t into Dar es Salaam from Zambia (taking Lusaka prices) and from Songea in Tanzania, respectively. The price data for Nairobi is patchier making comparisons more difficult, but for the months where there are data, prices in Nairobi are at levels similar to Dar es Salaam, around US\$1000/t (Figure 16). Moreover, there are reports of animal feed producers closing down in Kenya due to the high prices of soybean as a key input which starkly illustrates the harm from not having competitive well-functioning regional markets.⁶⁵

There are also **changes in soybean prices** during 2021 which raise concerns. Following the harvest in Zambia, Malawi and south-west Tanzania prices were just US\$400-450/t. Indeed, there were even prices of US\$370-380/t being reported in Zambia. Massive profits could therefore be made on these crops. After the harvest had been bought up by traders it appears prices climbed steeply, to US\$800/t and more. Farmers did not benefit from this increase having largely already sold their crops. Zambia responded to the price hike with an export ban on soybeans around August which brought prices down sharply by November, back close to US\$400/t (Figure 16), however, this exacerbated the market power of those holding soybean stocks in other countries.

There are high concentration levels at the trading level of soybeans and on the buyer side in terms of commercial crushing facilities. One company stands-out in terms of its share. ETG trades more than 500th tonnes per annum of non-GM soybeans in Africa (that is, excluding South Africa where GM crops are planted). This is larger than the total harvests in any of the countries and, given the proportion of production in each country not being traded and going direct to local processors, it suggests that ETG may be dominant across the region in being the buyer for over half the traded soybean crop.

Pricing patterns and trade flows – consumer prices for maize meal/flour

The regional comparison of maize meal prices to consumers flags areas for further assessment, when we take into account the maize grain prices which are the main input cost to milling. Prices in Uganda (Kampala), Kenya (Nairobi) and Tanzania (Dar es Salaam) are quite closely aligned and relatively stable, even while costs in the form of maize grain have fluctuated substantially, which is a possible collusion red flag (Figure 29).

Major flags are also raised when we compare the Zambian and Malawi prices. Zambian prices fell over 2020 to around US\$0.30/kg, in line with maize grain prices which fell sharply in 2020 to lows of US\$150/t (see Figure 13 in Nsomba et al. 2021). Malawi prices had also been at historically high levels in January 2020 (of US\$450/t, Figure 29), however, notwithstanding maize prices which fell

⁶⁴ This is also confirmed by interviews with smaller market participants and newspaper reports.

⁶⁵ Soymeal prices appeared to have been reasonable in Nairobi, but then increased very substantially in the second half of 2021.

below those in most other countries, Malawi maize meal consumer prices remained far above other countries and especially neighbouring Zambia, right through 2020. Large-scale commercial maize-milling in Malawi is highly concentrated, while the fortification requirements in Malawi provide a barrier to imports although it is not a significant production cost.

We also noted that rice prices in Kenya and Uganda are at huge mark-ups over international prices and those in Tanzania (Figure 19). And, issues could be assessed with regard to the soybean value chain if soy vegetable oil prices were compared across countries, along with prices for processed animal feed and poultry.

Additional flags such as restrictions on parallel trade and differential pricing

Additional flags can include features such as lobbying for trade restrictions and suppliers blocking parallel trade (that is, the cross-border trade of goods outside the distribution arrangements put in place by large firms within countries). Restrictions on parallel trade have been identified as a particular concern in, for example, the European Union. There may also be lobbying for restrictions such as relating to the licensing of imports.

Arrangements relating to distribution and parallel trade point to the possible interaction of vertical and horizontal restrictions as distribution and marketing constraints can be part of monitoring and enforcing horizontal agreements to divide markets across designated geographic areas, including countries. Competition cases internationally have pointed to the role that multiple levels of arrangements can play along value chains (Roberts, 2020).

12. Mergers

The CCC has established an effective merger regime, solving-problems and building institutional relationships with national authorities. It is a leading example of international merger review. The market observatory pilot highlights why this role matters. While horizontal anti-competitive mergers are deterred by careful scrutiny, there is a need for vigilance to be extended to the possible effects of vertical mergers and taking account of coordinated effects.

There is a general expectation that key industries in the region will be relatively concentrated because of the small size of African economies, especially relative to the minimum efficient scale for industrial production, there may well be a handful of substantial producers in individual economies. However, a regional perspective of firm's activities is critical to understand the networks of relationships at different levels of value chains and the nature and extent of multi-market contacts which can facilitate coordinated conduct (Roberts, 2016). Therefore, while competition effects may not necessarily be evident at a national level in terms of a merger transaction, this may be the case at a regional level.

It is also critical to appreciate the ways in which industries are evolving across the globe, together with increased demand in specific products. For example, in oil seeds, commodity trading internationally is especially concentrated and is linked to control of processing activities (Murphy and Burch, 2012; De Maria et al. 2020). The expansion of ETG and the associations with other major food groupings across countries and into the processing and animal feed levels of the value chain raise concerns about the scope for unilateral or coordinated conduct.

As with other competition investigations, market definition needs to consider the potential sources of competition rivalry in dynamic as well as static terms. *Mergers are more likely to have regional competition implications than may appear from the data at first sight.* Firms may not appear to be competing across borders because of understandings between them. There may be obstacles to trade which are being removed as part of regional integration and/or regulatory barriers which will be reduced, as harmonized regimes are developed and implemented. The picture presented by past trade flows is not necessarily a good indication of the forward-looking relevant markets.

The mergers highlighted in this paper are reflective of this, where potential effects in a single national market may not appear to be detrimental to competition within borders but could raise concerns across borders. This brings forth the potential for more collaboration on merger review between the CCC and national competition agencies. Even where a merger is only notifiable to a single jurisdiction, information sharing could be instrumental in the way in which markets are defined and assessed.

Market definition involves determining the competitive constraints which exist (as set out in the CCC Guidelines on Market Definition of 2019). This rationale is the same for product market definition as it is for geographic market definition. In defining a relevant geographic market, the focus is on identifying those firms whose operations constrain the potential market power of the firm(s) being investigated, because consumers can switch to these alternative suppliers outside of a given area or region (Motta, 2004). This may include firms whose operations go beyond national borders. This is at the heart of cross-border and regional merger enforcement.

Consideration needs to be paid to the role of imports and transport costs, especially considering the increasing regional scope of firms and regional integration as seen through firms such as Bakhresa, ETG, Innscor/Irvines, Tiger Brands and Zambeef. Similarly, information on transport costs relative to the price of the relevant product(s) is useful in defining the relevant geographic market.

In addition, acquisitions of companies which are potential competitors, in that they are in adjacent product or geographic markets may raise concerns in a regional context. The market definition guidelines of the CCC note that potential competition constraints are not taken into account when defining markets, but at subsequent stages in the analysis. This is appropriate, however, it requires engagement with national authorities where this may suggest a regional dimension of a merger which is being evaluated at the national level.

Insights from selected ESA mergers

The market observatory identified mergers that have been notified to competition authorities across the ESA region including the COMESA Competition Commission, Competition Authority of Kenya, the Competition and Tariff Commission Zimbabwe and the Competition and Consumer Protection Commission Zambia (see second report). These mergers took place between 2014 and 2019 in agricultural, agro-processing and agrochemicals markets.

The market observatory has identified key growth areas in markets such as for maize and soybean particularly for smallholder farmers, with opportunities arising through good harvests, low prices and indications of increased regional trade over the 2020/2021 harvest season particularly for soybean. Furthermore, the soybean value chain has been shown to have key opportunities along the

value chain through linkages into the animal feed industry given rising demand for poultry and fish products as a result of increasing urbanization.

However, amidst these growth opportunities have been mergers which have seen large firms expanding regionally, including through ownership relations, strategic partnerships and distribution arrangements, and being vertically integrated along one or multiple value chains. The brief assessment above has highlighted mergers which were potentially regional in scope and point to the importance of continuing to improve regional merger assessment by the CCC in partnership with the national authorities.

It is also important to consider the potential effects of not considering neighbouring countries when they do not fall within a specified regional block. An example of this is Tanzania. Where the CCC assesses a merger that is regional in scope, it is important to understand how Tanzania can be brought into the assessment given its significant economy in the region. In the case of mergers highlighted in this report, for example, both Bakhresa and ETG have a physical presence in Tanzania, with both production and consumption taking place in that country. Therefore, for a merger to effectively be assessed at a regional level, the scope of activities extending to Tanzania cannot be ignored, along with their potential effects on market power across the region.

Robust regional merger enforcement therefore has a critical role to play in ensuring more favourable market outcomes in the markets. To utilize resources more effectively, regional merger enforcement can also be used as signals for anticompetitive outcomes. However, this involves continuous sources of data on pricing, but also on market developments. Here, the market observatory can serve as a key resource. The observatory can serve as a source for critical insights into cross-border markets and competition concerns, as well as into methods of data collation. This can also be a way point out concerns about regional trade and competition, but also serve as an avenue to understanding and addressing these dynamics more effectively.

Furthermore, consolidation in some countries within the common market could potentially have competition effects in adjacent markets within the COMESA region, especially given that some economies may be smaller and more concentrated than others. For instance, in the processing of soybean in Malawi, activities are much more consolidated than they initially appear to be (see Table 9), with ownership of processing being shared by the same umbrella company in some cases, such as ETG and CP Feeds. This is important to consider when regional consolidation takes place, given that common ownership across countries amidst increasing concentration could potentially result in future conduct in one country with competition effects transcending national borders.

13. Conclusions and recommendations

The Market Observatory has highlighted that there are gaps in up-to-date pricing data of key food staples despite initiatives to make markets work better such as setting-up commodity exchanges in different countries. The commodity exchanges appear not to have taken-off partly because of the lack of broad-based market participants. The large international traders are aware of the prices across the region and have integrated trucking and storage capabilities meaning they can take advantage of the arbitrage opportunities and have no incentive to support commodity exchanges which improve price transparency. Data gaps and time lags to access data therefore persist, meaning

that poor market price information inhibits the assessment of, and response to, market developments, exacerbating price variations.

The poor information on pricing and challenges with storage mean that smaller farmers typically have to sell their produce soon after harvest and have received low prices, notably for soybeans, whilst big traders with storage and transport facilities have benefitted from substantial price increases in the following months. This suggests that market power is being exerted to corner supplies and exploited to charge high prices to buyers.

There are also major price differences between supplying and consuming locations which are much greater than transport costs and indicate excessive margins being earned by traders, and large buyers including processors with which they are integrated. The concentration at the trader and processor levels within and across countries points to competition concerns which warrant investigation.

The preliminary assessment points to very substantial consumer harm in some countries, most notably due to apparent issues at the milling level in Malawi, and at the trading level in Kenya, for maize and maize meal/flour. Prices in Malawi, for example, stand out as exceptionally high. Prices in Uganda and Tanzania for maize flour are also high when maize prices are considered. Markets are not working well and our initial findings also suggest potential market power along the value chain, where mark-ups are being extracted at either the trader and/or processor level.

The ESA region has potential for much higher levels of agricultural production, in areas where there is abundant water and good arable land, while in other areas increasing water scarcity constrains output. For these gains to be realized, action is needed with competition policy and enforcement to ensure markets are open to smaller participants on fair terms. Competition policy has a complementary role to play with other measures such as investments to support smaller market participants relating to storage, water management, logistics and transport.

Overall, the Market Observatory highlights the key role that the COMESA Competition Commission has to play in the ESA regional integration agenda if markets are to work effectively. This is even more important with the Tripartite Free Trade agreement and the AfCFTA. At present, regional markets are clearly not working well at all, motivating for the ramped-up agenda of the CCC which it has set out. Equally important is strong advocacy given the role of governments, both in restrictions which limit competition and in making sure the necessary supporting measures are in place to support smaller market participants to be effective competitors.

In line with the recommendations for the AfCFTA and Tripartite processes, a combination of enhanced co-operation between authorities, with strengthening regional bodies and supporting national authorities, is required. It is important to ground the appropriate steps in the specific challenges posed by different areas of responsibility.

Advocacy involves explanation and persuasion. It requires information and analysis and can progress without requiring confidential information, including across countries where national authorities are only now being established. We have proposed a set of priorities. It is also important to consider how publishing research will be done to raise the profile of competition issues and the regional competition regime in economic development and integration.

Merger review includes addressing the processes of notification, information requests, and agreement on thresholds and assessing the geographic nexus, where important progress has been made. This can be built-on to strengthen regional merger evaluation working together with national authorities and making the case to establish authorities where they do not already exist. Mergers also provide information on market structures which can assist in understanding market outcomes more widely.

Enforcement against cartels and other restrictive practices is even more challenging as the practices may be concealed and the companies involved will not generally volunteer information. Scoping of markets at the regional level needs to feed into effective screening for collusive conduct. Intelligence gathering is required, along with work on leniency programmes.

Our assessment has pointed to the interactions between the different areas. For example, regional **regulations which impede trade** can reinforce local market power within a country, harming consumers. We have identified concerns which require further assessment and investigation across countries and at different levels. There are regional concerns cutting across the markets relating to **transport and trading** which should be prioritized. The issues identified in specific products should be addressed through further inquiry and/or investigation.

The multi-product and multi-market nature of the major firms motivates for **broadening the scope of products** to include those such as sunflower seed, vegetable oil and poultry, as well as other important products, and **widening the countries** to include those such as Rwanda, the DRC and Burundi.

Lastly, the observatory has highlighted the importance of markets for food and agriculture for low-income consumers, and for smaller producers and farmers who may be excluded. The challenges posed by climate change adds to the need to prioritise assessment of the markets and value chains.

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Table A1: Available data on maize and soya prices

Maize	
Malawi	Agricultural Commodities Exchange for Africa (patchy); IFPRI VAM and FAO - only retail
Kenya	RATIN (not freely available and gaps in coverage)
Tanzania	Newspaper publications, RATIN, Ministry of Agriculture
Uganda	RATIN (not freely available and gaps in coverage)
Zambia	Potential App users, CCPC VAM – only retail
Zimbabwe	Fixed by government
Soya	
Malawi	Agricultural commodity exchange (ACE), IFPRI, potential App users
Kenya	RATIN (not freely available and gaps in coverage)
Tanzania	RATIN (not freely available and gaps in coverage), Ministry of Agriculture
Uganda	RATIN (not freely available and gaps in coverage)
Zambia	CCPC, potential App users
Zimbabwe	None

Table A2: Agricultural sector mergers and acquisitions by key players in ESA

Parent company Year/Country of merger	Merging parties	Nature of transaction	Activities of parties	Regional presence of parties
AgriGroupe Investments L.P 2014/COMESA	AgriGroupe Holdings Proprietary Limited (AgriGroupe) <ul style="list-style-type: none"> Ownership - AgriGroupe is controlled by Joseph Investments Limited (JIH) Mauritius which is wholly owned by AgriGroupe Investments L.P (Cayman Islands) AFGRI Limited (AFGRI) <ul style="list-style-type: none"> Ltd liability company incorporated in South Africa 	AgriGroupe acquires of 100% issued shares in AFGRI	AgriGroupe <ul style="list-style-type: none"> Focused on investments in agriculture in the African continent AFGRI <ul style="list-style-type: none"> dist of agricultural products, machinery, grain management, trading provision of agric services dist of animal feeds; oil crushing services agric financial services distribution of agricultural mechanization equipment 	AgriGroupe – Mauritius, South Africa AFGRI – Swaziland, Zambia, Zimbabwe
Cargill International 2015/COMESA	Cargill Holdings B.V <ul style="list-style-type: none"> Ownership – 100% by Cargill International Luxembourg Zamanita <ul style="list-style-type: none"> Ownership – 100% owned by Zambeef, a public company incorporated in Zambia and listed on the Lusaka Stock Exchange 	Cargill acquired 100% shareholding in Zamanita	Cargill <ul style="list-style-type: none"> Cotton originating and ginning Grain and oil seeds origination and trading Zamanita <ul style="list-style-type: none"> Oil seed crushing manufactures edible oil and soya meal importation of palm oil 	Cargill - South Africa, Kenya, Zambia, Zimbabwe and Mozambique Zamanita - Zambia
Zambeef 2016/COMESA	Zambeef Products Plc (Zambeef) <ul style="list-style-type: none"> Public company incorporated in Zambia Rainbow Farms Investment Proprietary Limited (RFI) <ul style="list-style-type: none"> Wholly owned subsidiary of RCL Foods Limited Zam Chick Limited (Zam Chick) <ul style="list-style-type: none"> Owned by Zambeef (51%) and RFI (49%) Zamhatch Limited (Zamhatch) <ul style="list-style-type: none"> Owned by Zambeef (49%) and RFI (51%) CDC Group Plc (CDC) UK dev finance institution wholly owned by UK Govt	Zambeef is acquired RFI's 49% shareholding in Zam Chick and 51% shareholding in Zamhatch under the Put Options exercised by RFI. Following the exercise of the Put Options, Zambeef will become 100% shareholder in both Zam Chick and Zamhatch.	Zambeef <ul style="list-style-type: none"> Production, processing, distribution and retailing of beef, chicken, pork, milk, dairy products, eggs, stock feed and flour Zam Chick <ul style="list-style-type: none"> Chicken broiler production Processing chicken meat products Zamhatch <ul style="list-style-type: none"> Chicken hatchery and breeding, and stock feeds RFI <ul style="list-style-type: none"> Processing and marketing of chicken meat products CDC	Zambeef – Zambia, Nigeria and Ghana Zam Chick – Zambia Zamhatch – Zambia RCL – Southern Africa CDC – Kenya, Uganda, Tanzania, Malawi, Zimbabwe,

Parent company Year/Country of merger	Merging parties	Nature of transaction	Activities of parties	Regional presence of parties
			Provides equity, debt, mezzanine finance guarantees to businesses	South Africa, Zambia
Government Employees Pension Fund of South Africa ("GEPF") 2017/COMESA	GEPF Limited <ul style="list-style-type: none"> South African state owned company ETG Inputs Holdco Limited (EIHL) <ul style="list-style-type: none"> Subsidiary of the ETG Group 	GEPF acquires 49% of the issued shares in EIHL	GEPF <ul style="list-style-type: none"> Invested in equities, fixed interest instruments, money market instruments, unlisted investments (private equity and developmental investments) and properties, including office, retail, industrial and residential property EIHL <ul style="list-style-type: none"> Import and distribution of agricultural fertilisers and agrochemicals products. 	GEPF - Mauritius, Swaziland, Uganda, Zambia and Zimbabwe EIHL - Ethiopia, Kenya, Malawi, Mauritius, Rwanda, Uganda, Zambia and Zimbabwe
Grindrod Limited 2018/COMESA	Grindrod Mauritius <ul style="list-style-type: none"> Owned by JSE listed Grindrod Limited New Limpopo Bridge Projects Limited (NLP) <ul style="list-style-type: none"> an investment holding company domiciled in Mauritius 	Grindrod acquired 100% in NLP	Grindrod <ul style="list-style-type: none"> Ship agency services, financial services, agricultural logistics and rail services NLP Infrastructure projects (mainline railway operations in Common Market)	Grindrod – South Africa, Mozambique, Zimbabwe, Zambia, Mauritius and Kenya NLP - Mauritius and Zambia.
Export Trading Group (ETG) 2018/COMESA	Vamara Group Limited <ul style="list-style-type: none"> 100% owned by ETG Elite Global Holding PTE Limited <ul style="list-style-type: none"> Elite is the holding company of Candlex Limited and Aspirants Plastics Converters Limited 	Vamara acquired 61.54% in Elite	Vamara <ul style="list-style-type: none"> Branded fast-moving consumer goods includes: animal nutrition; flour & instant breakfast cereals; long-life dairy; edible oils; laundry soap, powder and detergents; maize meal; pasta, noodles and rice; pulses; savoury snacks; spreads; canned ingredients and condiments; extruded soya pieces; and powdered beverages Elite <ul style="list-style-type: none"> manufacturing and supply of wax products (being candles and floor polish), laundry soap 	ETC - Ethiopia, Kenya, Malawi, Mauritius, Rwanda, Uganda, Zambia, and Zimbabwe Elite – Malawi and Tanzania

Parent company Year/Country of merger	Merging parties	Nature of transaction	Activities of parties	Regional presence of parties
			and powder, toilet soap, petroleum jelly, glycerine and lotion	
China National Agrochemical Corporation (CNAC) 2016/17, Kenya	China National Agrochemical Corporation <ul style="list-style-type: none"> owned by ChemChina (a Chinese state-owned chemical company) Syngenta AG <ul style="list-style-type: none"> wholly owned subsidiary of CNAC Saturn (NL) B.V., a subsidiary of China National Chemical Corporation (ChemChina) 	Acquisition of sole control of Sygenta AG by China National Agrochemical Corporation (CNAC)	China National Agrochemical Corporation <ul style="list-style-type: none"> Manuf and distributes agricultural chemical products. The Company produces herbicides, insecticides, bactericides, plant growth regulators, dietary supplements, and other products. China National Agrochemical markets its products worldwide Syngenta AG <ul style="list-style-type: none"> an agribusiness company, engages in the discovery, development, manufacture, and marketing of a range of products designed to enhance crop yields and food quality worldwide 	CNAC – Kenya, South Africa Syngenta AG – Kenya, Mozambique, South Africa, Tanzania
K2016379893 (South Africa) Proprietary Limited 2016/17, Kenya	K201637893 (South Africa) Proprietary Limited (BIDCO) <ul style="list-style-type: none"> <i>Details unavailable</i> Universal Industries Limited (Bidco) <ul style="list-style-type: none"> Universal Industries Corporation (82.5%) and Universal Industries Empowerment Trust (17.5%) 	Acquisition of 100% shareholding in Universal Industries Corporation (Proprietary) Limited by K2016379893 (South Africa) (Proprietary) Limited (Bidco)	K201637893 (South Africa) Proprietary Limited (BIDCO) <ul style="list-style-type: none"> <i>Details unavailable</i> Universal Industries Limited (Bidco) <ul style="list-style-type: none"> supplies equipment mainly to the food retail, wholesale, hospitality, manufacturing and related industries, i.e. supermarkets, bakeries, petrol station convenience stores, fast food outlets, restaurants, hotels, wholesalers, institutional, industrial and government kitchens, bottlers and brewers, refrigeration and catering contractors 	K201637893 – Kenya, South Africa Universal Industries - Kenya, Rwanda , South Africa, Tanzania and Uganda

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Bayer Aktiengesellschaft/ Kwa Investment Company 2016/17, Kenya	Bayer/KWA Investments Co. <ul style="list-style-type: none"> A subsidiary of Bayer AG (Germany) Monsanto Kenya Limited <ul style="list-style-type: none"> Subsidiary of Monsanto Company (US) 	Acquisition of 100% of the issued share capital of Monsanto Kenya Limited by Bayer Aktiengesellschaft/ Kwa Investment Company	Bayer/KWA Investments Co. <ul style="list-style-type: none"> mainly engaged in business of multiple fields covering medicine, consumer health and crop science Monsanto Kenya Limited <ul style="list-style-type: none"> mainly engaged in production and sales of seeds, transgenic traits and crop protection products 	Bayer – Burundi, Kenya, Malawi, Mozambique, Rwanda, South Africa, Tanzania, Uganda, Zambia, Zimbabwe Monsanto – Eswatini, Kenya, Lesotho, Malawi, South Africa, Tanzania, Zambia, Zimbabwe
Pinner Heights Kenya Limited 2017/18, Kenya	Pinner Heights Kenya Limited <ul style="list-style-type: none"> owned by Pradeep Paurana Trust ARM Energy Limited <ul style="list-style-type: none"> Subsidiary of ARM Cement 	Acquisition of 100% shareholding in ARM Energy Limited by Pinner Heights Kenya Limited	Pinner Heights Kenya Limited <ul style="list-style-type: none"> It's an investment vehicle ARM Energy Limited <ul style="list-style-type: none"> fertiliser and mineral production business 	Pinner Heights Kenya Limited – Kenya, Mauritius ARM – Kenya, Mauritius, Rwanda, South Africa, Uganda, Zambia
Stafruit Finco B.V 2017/18, Kenya	Stafruit Finco B.V <ul style="list-style-type: none"> a special acquisition vehicle controlled by Carlyle Partners VII Caymans Holdings L.P. (CP VII) which is a fund managed by the affiliates of the Carlyle Group (“Carlyle”) Specialty Chemicals Business of Akzo Nobel N.V <ul style="list-style-type: none"> Subsidiary of Akzo Nobel N.V 	Acquisition of 100% of the Specialty Chemicals Business of Akzo Nobel N.V. by Stafruit Finco B.V	Stafruit Finco B.V <ul style="list-style-type: none"> Carlyle which owns Stafruit, is a global alternative asset manager which manages funds that are globally invested across investment disciplines such as: corporate private equity; real assets; global credit; and solutions Specialty Chemicals Business of Akzo Nobel N.V <ul style="list-style-type: none"> produces a wide range of chemicals and operates the following business units globally: industrial chemicals; surface chemistry; pulp and performance chemicals; polymer chemistry; and 	Stafruit - Burundi, Kenya, Malawi, Mauritius, Rwanda, Swaziland, Uganda, Zambia, and Zimbabwe Akzo - Kenya, Uganda and Zambia

Parent company Year/Country of merger	Merging parties	Nature of transaction	Activities of parties	Regional presence of parties
			ethylene and sulphur derivatives	
Coconut Holdings Limited 2017/18, Kenya	Coconut Holdings Limited <ul style="list-style-type: none"> owned by DOB Equity of the Netherlands Kwale International Coconuts Company Limited <ul style="list-style-type: none"> private company 	Acquisition of 50% of the issued shares capital of Kwale International Coconuts Company Limited by Coconut Holdings Limited	Coconut Holdings Limited (CHL) <ul style="list-style-type: none"> produces certified organic and Fairtrade coconut oil and associated products Kwale International Coconuts Company Limited (KICCL) <ul style="list-style-type: none"> producer and exporter of Virgin Coconut Oil 	CHL - Kenya KICCL - Kenya
Omya (Schweiz) AG 2017/18, Kenya	Omya (Schweiz) AG. <ul style="list-style-type: none"> DLG Group (56%) and Omya (44%) Mavuno Fertilizers Limited <ul style="list-style-type: none"> Subsidiary of ARM Cement 	Acquisition of 51% shareholding in Mavuno Fertilizers Limited by Omya (Schweiz) Ag	Omya <ul style="list-style-type: none"> Supplier of industrial minerals based on calcium carbonate and dolomite and acts as a manufacturer and distributor of specialty chemicals Mavuno Fertilizers <ul style="list-style-type: none"> Production of organic fertilizers (specific nutrient fertilizers) 	Omya – Eastern African countries Mavuno - Kenya
Unifert Holding SAL 2017/18, Kenya	Unifert Holding SAL & Khalil Chahine Melki (KCM) <ul style="list-style-type: none"> Jointly owned by Unifert and KCM² Lachlan Kenya Limited <ul style="list-style-type: none"> Ownership details not available 	Unifert Holding SAL & Khalil Chanine Melki acquired 75000 shares in Lachlan Kenya Limited	Unifert <ul style="list-style-type: none"> International traders of fertilizers and other agricultural products Logistical solutions Lachlan <ul style="list-style-type: none"> Supplier and distributor of agricultural fertilizers in Kenya 	Unifert – Northern African countries Lachlan - Kenya
Christopher John Kirubi (CJK) Holdings 2017/18, Kenya	Christopher John Kirubi (CJK) Holdings <ul style="list-style-type: none"> Owned by Christopher John Kirubi Haco Tiger Brands E.A Limited <ul style="list-style-type: none"> Haco Industries (49%) and Tiger Brands (51%) 	CJK acquired a 51% stake in Haco Tiger Brands East Africa from Tiger Brands of South Africa	CJK <ul style="list-style-type: none"> Kenyan conglomerate into investments, fast food, banking, radio Haco Tiger Brands <ul style="list-style-type: none"> Manufacturing and distribution of fast moving consumer goods 	CJK – Kenya, Uganda Tiger Brands - South Africa, Zimbabwe, Zambia and Mozambique
Mitsui & Co Limited 2017/18, Kenya	Mitsui & Co Limited <ul style="list-style-type: none"> Japanese public listed company (Financial institutions- 38.53%, Foreign Investors – 29.85%, Individuals and others – 22.08%, Securities 	Acquisition of joint control in a full-function joint venture by Mitsui over ETC Group through an	Mitsui <ul style="list-style-type: none"> Agric products (origination, processing, import/export), fertilizer, other agric supplies, food manuf & sales Trading & supply of iron & steel, coal, non-ferrous metals, 	Mitsui – Egypt, Ethiopia, Kenya, Mauritius, Uganda and Zambia

Parent company Year/Country of merger	Merging parties	Nature of transaction	Activities of parties	Regional presence of parties
	<p>– 5.17%, and Others Corporations – 4.37%) ETC Group Limited</p> <ul style="list-style-type: none"> Wholly owned subsidiary of ETG, Dubai 	acquisition of shares	<p>machinery, electronics, chemicals, and energy related commodities</p> <p>ETC</p> <ul style="list-style-type: none"> Agric trading and processing business Production, supply of agric goods: soybeans, sesame seeds, oil seeds, sesame, soy meal, cashews, sugar, coffee, pulses, wheat, rice, maize; fertilizers 	ETG – Burundi, Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Mauritius, Rwanda, Uganda, Zambia and Zimbabwe
Pwani Oil Products Limited 2019/20, Kenya	<p>Pwani Oil Products Limited</p> <ul style="list-style-type: none"> Owned by the Malde family <p>Ushindi Brand</p> <ul style="list-style-type: none"> Subsidiary of PZ Cussons Kenya 	Acquisition of Ushindi Brand by Pwani Oil Products Limited	<p>Pwani Oil Products Limited</p> <ul style="list-style-type: none"> Manuf of edible oils, fat and laundry soap <p>Ushindi Brand</p> <ul style="list-style-type: none"> manuf of general soap products, non-specialty cleaners, perfumes, cosmetics and other toiletries 	<p>Pwani Oil Products – Burundi, DRC, Kenya, Malawi, Rwanda, Tanzania, Zambia</p> <p>Ushindi - Kenya</p>
Nairobi Securities Exchange Limited 2019/20, Kenya	<p>Nairobi Securities Exchange Limited</p> <ul style="list-style-type: none"> Standard Chartered Kenya Nominees (21.75%), Cfc Stanbic Nominees Kenya Limited (7.67%), Cabinet Secretary Treasury of Kenya (3.37%), Investor Compensation Fund Board (3.37%), Other (63.84%) <p>AKS Nominees Limited</p> <ul style="list-style-type: none"> A private company registered in the UK 	Acquisition of control of AKS Nominees Limited by Nairobi Securities Exchange Limited	<p>Nairobi Securities Exchange Limited</p> <ul style="list-style-type: none"> Promotes, develops, supports and carries on the business of a securities exchange and discharges all the functions of a securities exchange. Its segments include Cash equities and interest rate market, Derivatives, Interest income and Other income <p>AKS Nominees Limited</p> <ul style="list-style-type: none"> Non-trading company 	<p>NSE – Kenya</p> <p>AKS - none</p>
London Stock Exchange Group Plc 2019/20, Kenya	<p>London Stock Exchange Group Plc</p> <ul style="list-style-type: none"> York Holdings II Ltd (17.49%), Qatar Investment Authority (7.59%), York Holdings III Ltd (6.67%), BlackRock Inc. (5.09%), The Capital Group 	Acquisition of control of Refinitiv Business by London Stock Exchange Group Plc	<p>London Stock Exchange Group Plc</p> <ul style="list-style-type: none"> a diversified global financial markets infrastructure and data business <p>Refinitiv Business</p> <ul style="list-style-type: none"> global provider of financial market data and infrastructure 	<p>LSEG – Kenya</p> <p>Refinitiv - Kenya</p>

Parent company Year/Country of merger	Merging parties	Nature of transaction	Activities of parties	Regional presence of parties
	<p>of Companies Inc. (4.98%), BCP York Holdings L.P. (4.835), Lindsell Train Ltd (4.40%)</p> <p>Refinitiv Business</p> <ul style="list-style-type: none"> Blackstone Group LP (55%), Thomson Reuters (45%) 			
<p>Grainpro Africa (Mauritius)</p> <p>2020/21, Kenya</p>	<p>Grainpro Africa</p> <ul style="list-style-type: none"> Subsidiary of GrainPro Inc. <p>Grainpro Kenya</p> <ul style="list-style-type: none"> subsidiary of GrainPro Phillipines 	<p>Transfer of Grainpro Phillipines' entire issued share capital in Grainpro Kenya to Grainpro Africa (Incorporated In Mauritius)</p>	<p>Grainpro Africa</p> <ul style="list-style-type: none"> provides safe storage and drying of grains and seeds <p>Grainpro Kenya</p> <ul style="list-style-type: none"> storage, handling and distribution of food commodities 	<p>GrainPro - Kenya, Mauritius, Uganda, Zimbabwe</p>
<p>Anirita Holdings</p> <p>2020/21, Kenya</p>	<p>Anirita Holdings</p> <ul style="list-style-type: none"> The Velji family <p>Anirita Poultry Farm PLC</p> <ul style="list-style-type: none"> Subsidiary of Africa Protein Holdings 	<p>Acquisition of 99.99% of the issued share capital of Anirita Poultry Farm PLC by Anirita Holdings</p>	<p>Anirita Holdings</p> <ul style="list-style-type: none"> A family owned with various business interests <p>Anirita Poultry Farm PLC</p> <ul style="list-style-type: none"> an integrated poultry producer in Kenya 	<p>Anirita Holdings – Kenya</p> <p>Anirita Poultry Farm – DRC, Kenya, Rwanda</p>
<p>2020/21, Kenya</p>	<p>Societe De Promotion Et Participation Pour La Cooperation Economique</p> <ul style="list-style-type: none"> 100% held by the Caisse Centrale de Coopération Economique (Proparco) <p>Investment Fund For Developing Countries And Si Advisers LLP</p> <ul style="list-style-type: none"> owned by the Government of Denmark <p>Global Tea and Commodities Limited</p> <ul style="list-style-type: none"> owned by Nadeem Ahmed 	<p>Acquisition of minority shareholding in Global Tea and Commodities Limited by Societe De Promotion Et Participation Pour La Cooperation Economique, Investment Fund for Developing Countries And Si Advisers LLP</p>	<p>Societe De Promotion Et Participation Pour La Cooperation Economique</p> <ul style="list-style-type: none"> private investment in developing countries which targets growth, sustainable development and reaching the Millennium Development Goals (MDGs) <p>Investment Fund For Developing Countries And Si Advisers LLP</p> <ul style="list-style-type: none"> provides risk capital and advice to companies wanting to do business in parts of Europe, Asia, Latin America and Africa <p>Global Tea and Commodities Limited</p>	<p>Societe De Promotion Et Participation Pour La Cooperation Economique - Uganda</p> <p>Investment Fund For Developing Countries And Si Advisers LLP – Kenya, Malawi</p> <p>Global Tea and Commodities Limited - Kenya, Malawi</p>

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			<ul style="list-style-type: none"> fully integrated tea, coffee and macadamia companies offering a range of services at all stages of the supply chain 	
Agri-Vie Fund II Proprietary Limited 2020/21, Kenya	Agri-Vie Fund II Proprietary Limited <ul style="list-style-type: none"> subsidiary of EXEO Capital Glacier Products Limited owned by Dipam Shah 	Acquisition of control of Glacier Products Limited by Agri-Vie Fund II Proprietary Limited	Agri-Vie Fund II Proprietary Limited <ul style="list-style-type: none"> food & agribusiness investment fund in Sub-Saharan Africa Glacier Products Limited <ul style="list-style-type: none"> manuf of ice-cream, chocolate and whipping cream used for making cakes and lattes 	Agri-Vie Fund II – Kenya, Uganda, Rwanda, Tanzania, Mozambique, Zambia, South Africa Glacier Products Limited – DRC, Kenya, Tanzania, Rwanda, Uganda
Bioline Group SAS 2020/21, Kenya	Bioline Group Sas <ul style="list-style-type: none"> subsidiary of InVivo Group of France Dudutech Integrated Pest Management Limited <ul style="list-style-type: none"> subsidiary of Flamingo Group International 	Acquisition of 100% issued share capital of Dudutech Integrated Pest Management Limited by Bioline Group SAS	Bioline Group Sas <ul style="list-style-type: none"> production and distribution of biocontrol solutions Dudutech Integrated Pest Management Limited <ul style="list-style-type: none"> Integrated Pest Management (IPM) with a wealth of experience in designing and delivering biological pest control solutions 	Bioline Group Sas – Kenya Dudutech Integrated Pest Management Limited - Kenya
Aaryan Investments Limited (AIL) 2021/Kenya	Aaryan Investments Limited <ul style="list-style-type: none"> Aaryan Family Trust Bidco Land O' Lakes Limited <ul style="list-style-type: none"> AIL (50%) and Bidco Africa (50%) 	Aaryan Investments Limited acquired additional 50% shareholding in Bidco Land O' Lakes Limited	AIL <ul style="list-style-type: none"> An investment holding company Manuf fast-moving consumer goods and fruit-based drinks Bidco Land O' Lakes <ul style="list-style-type: none"> Manuf and distribution of animal feeds 	AIL – Kenya Bidco Africa – Kenya, Tanzania, and Uganda
Industrial Development Corporation (IDC) 2018/Zambia	IDC Zambia <ul style="list-style-type: none"> Zambian state owned entity Superior Milling Company Ltd (SMC) <ul style="list-style-type: none"> Mulenga Family Business 	IDC Zambia acquires 76% shareholding in SMC	IDC Zambia <ul style="list-style-type: none"> Industrialization and rural development in Zambia SMC <ul style="list-style-type: none"> Commodity trading Production of maize flour, flour, rice, sugar, insembe (grits) and salt 	IDC Zambia – Zambia SMC - Zambia

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Export Trading Group (ETG) 2019/Zambia	Parrogate FCZ <ul style="list-style-type: none"> 100% owned by ETG Parrogate Zamanita <ul style="list-style-type: none"> 100% owned by Cargill Holdings B.V 	Parrogate acquired the entire shareholding of Cargill in Zamanita	Parrogate <ul style="list-style-type: none"> Cotton ginning, maize milling, ferro alloys, oil extraction and refining; and snacks manufacturing Zamanita <ul style="list-style-type: none"> Oil seed crushing manufactures edible oil and soya meal importation of palm oil 	Parrogate – Malawi, Zambia and Zimbabwe Zamanita - Zambia
Virgin Dairy Ltd 2019/Zambia	Virgin Dairy Ltd <ul style="list-style-type: none"> Co-owned by Herman Kibler and Ngenda Mwikisa Diamonddale Dairy Business <ul style="list-style-type: none"> Wholly owned by Galaunia Farms Ltd 	Virgin Dairy acquires Diamonddale Business from Galaunia Farms	Virgin Dairy <ul style="list-style-type: none"> Dairy milk production and distribution Diamonddale <ul style="list-style-type: none"> Dairy fresh milk production 	Virgin – Zambia Diamonddale - Zambia
Grindrod Limited 2014/Zimbabwe	Grindrod Trading <ul style="list-style-type: none"> 100% owned by JSE listed Grindrod Limited United Refineries Limited (URL) <ul style="list-style-type: none"> Different private shareholders⁶⁶ 	Grindrod Trading acquired a 51% stake in URL	Grindrod <ul style="list-style-type: none"> Ship agency services, financial services, agricultural logistics and rail services URL <ul style="list-style-type: none"> Production of cooking oil (cotton seed and soybean) and soap 	Grindrod – South Africa, Mozambique, Zimbabwe, Zambia, Mauritius and Kenya
Wilmar International (WI) 2014/Zimbabwe	Amando Pte Limited <ul style="list-style-type: none"> Wilmar International (91.38%) Surface Investments Private Limited (SIPL) <ul style="list-style-type: none"> Midex Global (74%) and Industrial Development Corporation of Zimbabwe (26%) 	WI, through Amando, acquired a 45% stake in SIPL	WI <ul style="list-style-type: none"> Oil palm cultivation oilseed crushing & edible oils refining sugar milling and refining manuf of consumer products, specialty fats, oleochemicals, biodiesel and fertilisers flour and rice milling SIPL <ul style="list-style-type: none"> processing of oil seeds, refining to cooking oil production of cotton lint, cotton meal, cotton hull and soybean meal 	WI – Mauritius, Zimbabwe, Zambia and Tanzania SIPL - Zimbabwe

⁶⁶ This information could not be obtained from public sources.

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Wilmar International (WI) 2016/Zimbabwe	Surface Wilmar <ul style="list-style-type: none"> Wilmar International (45%), Midex Global (45%) and 10% of the Industrial Development Corporation (IDC) Olivine Industries <ul style="list-style-type: none"> AICO Africa now Cottco Holdings (49.3%) and the Ministry of Finance (50.7%) 	Wilmar International acquired 49.3% shareholding from AICO	WI <ul style="list-style-type: none"> Oil palm cultivation oilseed crushing & edible oils refining sugar milling and refining manuf of consumer products, specialty fats, oleochemicals, biodiesel and fertilisers flour and rice milling Olivine <ul style="list-style-type: none"> Production of cooking oil, vegetable oil, margarine and bakers fats, and soaps Crush soya and cotton seed 	WI – Mauritius, Zimbabwe, Zambia and Tanzania
Bakhresa Group 2016/Zimbabwe	Bakhresa Zimbabwe <ul style="list-style-type: none"> 100% owned by Bakhresa Group Blue Ribbon Industries (BRI) <ul style="list-style-type: none"> Orchadian Enterprises (74%), Cereal International Ltd (16%) and Employee Ownership Trust (10%) 	Bakhresa Zimbabwe acquired 100% shareholding in BRI	Bakhresa <ul style="list-style-type: none"> Production of maize and wheat flour BRI <ul style="list-style-type: none"> Production of maize and wheat flour Production of stock feeds: broiler, layers and pig feeds 	Bakhresa – Zimbabwe, Malawi, Tanzania, Kenya, South Africa, Mozambique, Rwanda, Uganda and Seychelles
Innscor Africa Limited (IAL) 2016/Zimbabwe	National Foods Ltd <ul style="list-style-type: none"> Innscor Africa Ltd (37.73%), Tiger Brands (37.45%), and the National Foods Workers Trust (9.85%) Pure Oil Industries (POI) <ul style="list-style-type: none"> A joint venture between ETG/Vamara and Parrogate Zimbabwe 	National Foods acquired a 40% stake in POI	National Foods <ul style="list-style-type: none"> manufacturing and marketing foodstuffs and stock feeds (beef and dairy feed, chicken feed, pigs and fish) POI <ul style="list-style-type: none"> processing of edible oil primarily soybean, cotton, palm, sunflower and canola oi soymeal, cotton cakes and sunflower cake for stock feed industry 	ETG - Ethiopia, Kenya, Malawi, Mauritius, Rwanda, Uganda, Zambia, and Zimbabwe IAL - Zimbabwe

Source: Compiled from multiple sources from competition authorities