Southern Africa and Agro-processing: Investigating the state of agricultural RVCs and the role of South African food retailers in regional supplier development

A Dissertation in Fulfilment of an MCom in Development Economics

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ABSTRACT

Regional integration in southern Africa must enable wide-spread economic benefits. Agro-processing value chains could play a significant role in pursuing this kind of growth but can only do so with public-private collaboration and strong developmental regionalism.

Agricultural and agro-processing regional value chains are a mechanism through which countries can upgrade their production capabilities, while supporting poor communities and driving economic development. Unfortunately, current growth and trade performance indicates that these sectors have not reached their potential. Variability and volatility in agriculture, practical challenges of trade facilitation, and slow growth in agro- processing have limited the industry's impact on development. South Africa's trade dominance also leads to political resistance to further regional integration. These challenges limit other southern African countries from upgrading in this industry by restricting development of regional value chains, preventing agro-processing industries from achieving global competitiveness.

Case studies of supermarkets' engagement in the region and Nando's supplier development programmes provide a qualitative assessment of why agro-processing has not expanded significantly, and what steps might be taken to stimulate its growth. The role of supermarkets in regional agro-processing is significant, but their contribution toward the industry's development has so far had limited impact. Case studies show supermarkets do operate some effective supplier development programmes but face severe challenges. The Nando's Peri Farms Initiative provides an example of an effective supplier development programme, balancing business with socially oriented outcomes. The programme invests in regional suppliers and guarantees prices to small scale farmers. This ensures that farmers in the project experience improvements in their standards of living and business prospects, while also securing Nando's business interests. This kind of programme may be scalable to other firms, but requires incentives from government, aid donors, or NGOs to encourage large firms to pursue socially beneficial objectives.

Further research into the role of firms like Nando's and the scalability of Peri Farms Initiative-style projects is needed in order to understand how the expansion of supplier development could pursue developmental outcomes and the growth of equitable regional value chain participation. Additional investigation into the role of incentives for private firms through government or non-governmental organisation (NGO) involvement would be valuable. Furthermore, this kind of programme may be applicable to food suppliers and producers, and research of those industries could broaden the impact of this research.

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LIST OF ACRONYMS

AfCFTA	African Continental Free Trade Area
ASEAN	Association of Southeast Asian Nations
AU	African Union
DC	Distribution Centre
FTA	Free Trade Area
GAP	Good Agricultural Practices
GVC	Global Value Chain
HS	Harmonised System
n.e.c	Not elsewhere classified
NGO	Non-Governmental Organisation
NTB	Non-Tariff Barriers
R&D	Research and Development
RVC	Regional Value Chain
SACU	Southern African Customs Union
SADC	Southern African Development Community
UN	United Nations
WTO	World Trade Organisation

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1. INTRODUCTION

1.1 Background

Greater regional integration in Africa could drive sustainable economic development in the continent. However, equitable and developmental integration requires consistent and creative policy development. Integration has never been an easy process, and the significant variations between countries' economies means that finding well balanced solutions will be challenging. Currently, regional integration in southern Africa is making steady progress. Unfortunately, South Africa's dominance of the region, particularly its large trade surplus, presents a potential obstacle to further integration. This paper investigates the role of regional value chains (RVCs) and targeted supplier development in the agro-processing sector.

Southern African economies remain heavily reliant on resources and agriculture. Furthermore, regional trade is low, with a disproportionately large share of exports going outside the continent. However, the development of the agro-processing industry offers RVC growth and pro-poor development, if pursued correctly. Agro-processing, as a value-added activity, is potentially more pro-poor than industrialisation through more traditional manufacturing industries, due to its benefits for rural and marginalised communities and strong linkages to the agricultural sector (Black *et al.*, 2020). Southern Africa has only seen limited amounts of these developmental benefits from the industry so far. Agro-processing's potential must be better engaged by improving regional integration and promoting supplier development that targets more balanced trade and results in socio-economic benefits for producers.

1.2 Methodology

The paper uses a mixed-methods approach to assess the role of RVCs in sustainable economic development, and particularly the role of food retailers in supplier development across the region. The first assessment makes use of trade data to assess the past and current impact of RVCs on Southern Africa's economic development, and test for various challenges that a regional development approach may face, such as regional dominance by a single country. This assessment uses data to drive findings around potential opportunities in the regional market. The second half of the assessment then makes use of case studies to build a qualitative picture of supplier development in agro-processing, as well as the challenges and drivers of success that supplier development programmes face in growing regional value chains and contributing toward inclusive development across the Southern African region. The combination of the quantitative trade data assessment and the qualitative case study analysis aims to build a factual assessment with sufficient nuance and contextualization to contribute actionable and credible findings on the role of agro-processing, supplier development, and regional value chains, in developmental growth in Southern Africa.

1.3 Aim of study

This paper investigates the current state of agro-processing in southern Africa, as well as the role that South Africa plays in the region's agricultural trade southern African agriculture. It then examines an option for tapping agro-processing's potential by studying the role that South African supermarkets and other food retailers could play in driving regional supplier development. These findings carry policy implications for trade, regional integration, and supplier development support in southern Africa.

This dissertation is structured in the following manner. Section 2 presents the literature underlying the role of agro-processing, regional trade, and regional integration. Section 3 analyses the data on southern African trade in agricultural and agro-processed products, investigating how the industry has developed in recent years. Section 4 then unpacks how effective supplier development could be pursued through case studies of food retail firms – supermarkets and others – that are engaged in regional supplier development. Section 5 concludes with a consideration of policy recommendations and areas for further research.

2. LITERATURE REVIEW

2.1 Introduction

This chapter unpacks the literature on the role of trade and RVCs in development, and the role that regional integration has played in southern Africa's development thus far. It highlights research on the potential of agriculture and agro-processing to drive developmental, pro-poor growth. Here the role of supermarkets and food retail supplier development programmes is examined. This section concludes that the current research shows the advantages of agro-processing, but has yet to investigate the best mechanisms through which agro-processing can be optimized to drive developmental growth in southern Africa. Finally, it raises questions about the developmental impact of supermarkets in the region.

2.2 Theory of trade, value chains and upgrading

The modern global economy follows highly fragmented methods of production. This has changed how industries develop and has therefore altered the methods for achieving growth and development. The shift emphasises the importance of trade for development, and the importance of developing regional trade. RVCs can be an important mechanism to promote the advantages of trade-based production, while also defending against immiserising growth traps and "race to the bottom" scenarios that are so common in global trade.

2.2.1 Trade as a mechanism for growth

Trade has become central to successful economies as globalisation has opened the opportunities for higher levels of market access, and for cheap inputs and production. It provides countries with the opportunity to grow and develop local industries, but also creates a set of complex challenges that need to be carefully navigated and overcome.

Trade allows for specialisation and increased competition. It allows a country to produce goods that it has a comparative advantage in – products that it can produce efficiently, and at a lower opportunity cost than other countries – and exchange that product for goods and services that it needs from other countries. This process means that goods can be produced more cheaply and encourages companies to pursue cost-efficiency in order to gain the comparative advantage. This is a simplification of Ricardo's comparative advantage theory (Williamson, 2014: 280). While comparative advantage theory is simplistic (Redding, 1999; Lin and Chang, 2009), it does provide important insight into some of how modern trade has potential benefits.

Trade also allows firms to access far more consumers of the product than the domestic market, resulting in the potential for economies of scale that can create cheaper production, upgrading investment, and result in growth in the value of the product (Ismail, 2017). Assuming specialisation allows companies to develop cheaper, more efficient methods of production, and the development of new industries because of the linkages associated, this larger market access can allow countries to focus on upgrading in a particular product or industry by achieving economies of scale that the larger consumer base supports (Parshotam and Diez, 2019) all while allowing countries to cheaply import other necessary products.

The advantages of trade must compete with the inherent challenges that trade presents. Despite its advantages, Ricardo's comparative advantage theory also risks trapping countries in low-wage, low value-added production, without upgrading (Lin and Chang, 2009). In order for countries to pursue industrialisation, it is essential that trade is balanced with investment in local industries that are internationally competitive, but may have the ability produce value-added, upgraded products in the future (Lin and Chang, 2009; Ismail, 2017). The protection of infant industries has been present in the development of all major economies, and the liberal emphasis on free trade fails to deal with the imbalances and dependences that often result (Ismail, 2018). Trade does not automatically guarantee economic success or development, and unfettered trade has the potential to do the opposite for developing countries.

These advantages and challenges have been seen most recently in the development of global value chains (GVCs) and RVCs. These kinds of production chains between countries allow for specialisation, trade in value-added goods, and the production of cheaper, higher quality goods that benefit the consumer (Kaplinsky, 2013). Initial theories also saw these value chains as upgrading opportunities for developing countries, that could use knowledge and technology transfer from being linked into a value chain to develop their own domestic industries and begin to trade in higher value-added products or components. However, this benefit is far from guaranteed, and these trade systems can also lock countries into immiserising, low-wage production incredibly challenging to (Kaplinsky, 2013; Gereffi, 2014).

As value chains become more central to the global economy, trade must be conducted carefully to mitigate against risks to developing countries. At the same time, if handled correctly, value chains have the potential to become a valuable tool in economic development.

2.2.2 Global value chain and global production network theory

The advent of GVCs as the primary form of global production has led to an increased emphasis on the importance of trade, and has allowed production to shift to developing countries with lower wages and lower costs of production. GVCs changed the location of production, the power structures, and the influence that governments have over industries. This shift has created opportunities for development that were previously inaccessible for developing countries, but these opportunities come with their own challenges, power imbalances, and obstacles to trade and development that must be overcome in order for a country to successfully upgrade.

Gereffi (2014) unpacks the progress of GVC development over the past 30 years, and the shift in GVC production that has occurred since the end of the Washington Consensus. GVCs developed because cheap international transport enabled firms to locate production based on costs specific to each location – particularly low wages – and move the required components around the globe based on where production costs are lowest (Gereffi, 1994). It has since resulted in outsourcing of production, high levels of offshoring, and shifts in the power dynamics surrounding production. These GVCs provide opportunities for countries with cheaper costs of production to achieve economic growth through the process of 'upgrading' (Kaplinsky, 2013).

Upgrading is the process of moving 'up' through a value chain from low value-added activities to higher value-added activities. In theory upgrading allows a country to increase the rents captured within the value-chain, creating higher levels of growth, and linking other industries to promote development and progress within the domestic economy (Gereffi, 2014; Morris and Staritz, 2019). While upgrading has been a successful development path for some economies, there are limited opportunities for countries to develop off the initial stages of GVC participation, and upgrading is by no means a certain prospect (Morris and Staritz, 2019).

There are various forms of upgrading that can take place, as detailed by Humphrey and Schmitz, 2002). Product upgrading entails a firm producing more advanced product lines, process upgrading would involve growth in the production process and a more efficient journey from input to output, functional upgrading entails additional functions that would drive up the skill content (and therefore value addition) of a production process, and chain upgrading would move firms into new industries that have clear adjacencies with their current industry (Gereffi, 2013).

The type of value chain governance experienced is also key to identifying which value chains may drive particular forms of growth and upgrading. Gereffi (2005) primarily focuses on a coercive form of power which defines power as 'the capacity of an actor to exercise and achieve control over a particular strategic outcome in its own interests that can be realized only through the process of exercising' (Coe and Yeung, 2015). Dallas et al (2019) expand the framework to four types of power found in GVCs, set along two dimensions – the arena of actors, and the transmission mechanisms. Where there is only a diad of actors, and a direct transmission mechanism, bargaining power is found, which reflects the most typically considered power in

GVCs since it is a firm-to-firm dynamic that reflects Gereffi's 'lead firm' concept. Demonstrative power, which is dyadic but the transmission mechanism is diffused, is an informal mechanism through which actors can elicit change. Institutional power, which is power across multiple actors with a direct transmission mechanism, is power exercised by collectives. This can include state intervention, or other formal groups that participate in decision-making. Finally, constitutive power, which has collective actors and indirect transmission mechanisms, is power that is not embodied in a formal collective but becomes a norm or convention that is expected. Each of these power forms can take place within a GVC and must be considered as key mechanisms to drive particular types of changes.

However, instead of providing upgrading opportunities, low value-added production can result in a 'race to the bottom', pushing wages down and sometimes even creating immiserising growth that has a negative impact on the domestic economy (Kaplinsky and Morris, 2016). It can be challenging for governments to structure GVC participation in a way that achieves upgrading, since the power structures of GVCs limit governments' impact on production decisions and GVC participation (Gereffi, 2014; Davis, Kaplinsky and Morris, 2018). Where GVC's exist, governments are often deprived of their usual policy tools to promote economic growth, leaving countries reliant on upgrading, and at risk of being locked into low value-added production.

Kaplinsky and Morris argue in their 2016 paper that GVCs can be seen as 'vertically specialised' or 'additive'. Vertically specialised value-chains fit within the traditional manufacturing framework, with components being produced concurrently and separately, assembled, and then sold. Additive value-chains involve production through consecutive steps in the manufacturing process, and are often seen in the production of agricultural products where one firm buys an input, adds value through a step in the manufacturing process, and then sells it on to the next.

These additive value chains have previously been under-theorised, and the move toward them in GVC literature presents an opportunity for agricultural countries to grow value-additive processes.

2.2.3 Regional value chains

Regional value chains might allow more accessable upgrading opportunities and be easier to access than GVCs (Black *et al.*, 2020), especially in cases involving the additive value chains discussed above.

RVCs are widely seen as having the potential to drive regional integration, development goals, and economic growth for developing countries. On top of the benefits of participating in a value chain, RVCs promote intra-regional trade, making them strong drivers of regional integration (Black *et al.*, 2019). Reduced trade barriers and costs of trade allow domestic companies to participate in RVCs by creating access to larger markets and more competitive inputs. This can result in private firms using their influence to push government to lower trade barriers, improve integration, and facilitate trade with the surrounding region. This can be seen in the Association of Southeast Asian Nations (ASEAN) economic region, Japan's automotive industry pushed for the scale of a regional market, and played a significant role in driving integration in the region (Wad, 2008).

RVCs reduce the distance inputs travel between stages in production, making them attractive for the additive value chains that Kaplinsky and Morris (2016) outline, especially for agricultural products that rely on freshness, short transport times, and cold chains to retain their value. These additive RVCs also present an opportunity for a region to benefit from the advantages of value-chain participation while avoiding competition with GVC-level production (Kaplinsky and Morris, 2016). This does, however, rely on a level of regional integration and trade facilitation sufficient for regional trade to occur smoothly (Scholvin, 2016). As much as a strong RVC can promote regional integration, the growth of additive RVCs is likely to require trade facilitated by successful regional integration. This means that intervention is likely required to drive the development of RVCs that promote regional integration and allow the advantages of regional trade (Black *et al.*, 2020).

Finally, RVCs have the potential to play an important pro-poor role in developing economies, because they can gain access to a large regional market without the products having to compete with completely free global trade (Black *et al.*, 2019). This means that the race to the bottom when producing low value-added inputs is less damaging to wages than it would be in a GVC. In addition, developing regions with more localised production can still promote policies that produce employment and better wages for these low value-added industries while still capturing more of the rents than they would be able to within a GVC. This kind of regional protection can allow industries to grow, and then eventually integrate into GVCs as they become established and cost effective. Again, however, this is only successful if the region has sufficient integration to allow these products and components to be easily traded intra-regionally.

The existing research shows that southern Africa's growth objectives might be well served through the development of RVCs. These are likely to be more beneficial for initial industrial development than GVCs because of their ability to promote regional integration and therefore facilitate more local trade and the promise of additive value-chains reducing the risks of global competition by allowing the region to maintain some protections for its industries. RVCs can serve as a stepping stone into a GVC by allowing an industry to develop out of infant industry stage and to the point where it can participate in the global market.

2.3 Theory of regional integration

Regional integration has been regarded as an important step toward economic growth and development (Black *et al.*, 2019) and is currently being pushed throughout Africa as a method of achieving these goals. There are strong links between RVC's and regional integration, however, as with all complex development issues, there are challenges inherent in regional integration that must be dealt with.

2.3.1 Regional integration's economic implications

Regional integration provides countries with access to a larger market for their products, which is less restricted by tariffs or non-tariff barriers (NTBs) than trade with the rest of the world. This is especially important for countries that have relatively small markets cannot achieve the economies of scale that enable them to produce at competitive prices (Gillson, 2010). By opening regional borders but maintaining some external barriers, the economic region can still protect certain industries from global competition – within World Trade Organisation (WTO) rules – while simultaneously pursuing growth (Rippel, 2011). This also facilitates the creation of regional value chains, as discussed above, by making the trade of inputs and components cheaper. Regional integration therefore promotes economic growth both through the access to larger markets, access to cheaper means of production, and technology spill-overs, all while maintaining external protection against international trade while industries are not ready to integrate globally.

Classical regional integration theory was formally laid out by Viner (1950), who argued that there is a linear process of regional integration in that countries progress through degrees of integration. His linear model progresses from a preferential trade agreement, where only some products are tariff free, all the way to political union, at which point the multiple states in the union are almost indistinguishable, sharing both economic and political policy (Viner, 1950). While this outline has provided structure for understanding the process of regional integration, it was largely modelled off the European experience. Regional integration in the post-Washington Consensus world, and in the Global South, requires a far more nuanced and contextualised understanding (Ismail, 2018). Furthermore, it is important to note that there are some downsides to reginal integration. Within regional integration arrangements, trade is usually with a protected producer, which means that inputs are often not purchased from the cheapest source. This can lead to trade diversion, which imposes economic costs. On the whole, regional integration arrangements are positive, but it remains important to address these potential downsides. This means that African integration must be tailored to its own context, as well as these potential challenges of regional integration.

2.3.1 African regional integration

Africa's current regional integration circumstances are complex, and have largely failed to facilitate the economic growth. There are numerous overlapping economic regions, which create what is known as the 'spaghetti bowl' of African regional integration (African Export-Import Bank, 2018). These overlapping and complicated regional arrangements have hindered the efficacy of regional integration. The overlapping trade borders have prevented internal trade liberalisation from becoming more complete. Although some regions, such as the Southern African Development Community (SADC), have been more successful than others (African Export-Import Bank, 2018), it is hard to separate out the success of these regions from the economic strength of individual countries that are members of the regions – especially in the case of South Africa (Black *et al.*, 2019).

Attempts to improve these complicated regional arrangements has culminated in the acceptance of the African Continental Free Trade Area into African Union (AU) law. This is a free trade agreement (FTA) that is intended to override the existing regional arrangements and allow regional integration to contribute to economic growth within the continent (Odijie, 2019). While the successful implementation of this FTA – and decisions around important issues such as movement of services, capital, and labour – is still a work in progress, its existence clearly demonstrates a trend toward stronger integration in Africa. Ismail (2018) argues that in order for Africa to experience successful regional integration, it cannot pursue integration in the classical, linear method that is outlined by Viner (1950). Ismail (2017) calls for a "developmental integration" that focusses not just on tariff reduction, but also on improving trade facilitation and cross-border infrastructure. His research promotes trade integration that balances the benefits between stronger and weaker economies, creating regional value chains and transformative industrialisation, and promoting democracy, peace, and political stability. He argues that integration with this developmental focus has the best chance of allowing the AfCFTA to successfully drive economic growth across both the strong and weak economies involved in the agreement.

However, Scholvin (2016) has a less positive opinion of regional integration under the AfCFTA. He views the promotion of regional integration within southern Africa as risking the creation of an exclusive market for South African goods. He argues that South Africa is unlikely to relocate production activities to other countries in the region, which could mean that South Africa would be the only country to experience significant growth in value-added products under a more integrated region. Instead, the AfCFTA may limit the ability of RVCs to diversify into GVCs, and thereby restrict the international trade which could be beneficial to the smaller economies in Africa. This would subsequently cause trade to be even more centred around larger African economies – like South Africa and Nigeria – than it currently is, and prevent equitable growth across the continent.

These perspectives on regional integration in Africa warn that in order for its potential benefits to be equitably spread, integration must be done carefully. Southern Africa's regional integration cannot simply follow the process undergone in other economic regions. It must ensure that growth effects also benefit smaller economies and take context into account.

2.4 The southern African context – agriculture, economic growth, and trade

Southern Africa has experienced the most successful form of economic integration within the African continent. The South African Development Community (SADC) has arguably been the most successful FTA in the continent, although its success may be largely due to the presence of South Africa's larger and more developed economy (Vickers, 2016). Despite SADC's successes, this region has failed to achieve integration in a number of significant areas. Some remaining barriers to trade, mostly in the form of NTBs, continue to allow southern African countries to protect their industries. This has limited the development of strong RVCs (Gillson, 2010). Furthermore, South Africa's ongoing economic dominance in the region means that it continues to provide the majority of the region's manufactured products, prompting other countries to resist further liberalisation for fear of losing uncompetitive industries (Scholvin, 2016).

2.4.1 Agriculture's role in African growth

One of the industries that has promise for promoting regional integration, growing RVCs, and driving economic development in the region is the agricultural and agro-processing industry (Black *et al.*, 2019, 2020).

Agriculture has long been recognised as an essential industry for economic success. Initially Lewis's dualism development model argued that agricultural development would free labour to move into manufacturing (Nattrass and Seekings, 2019). This allowed countries to maintain low wages in manufacturing, resulting in cheap value-added production (Ravallion, 2008; Diao, Hazell and Thurlow, 2010; Henley, 2012). However, studies of Africa's economies and trade emphasise the independent role that agriculture must play in order for the continent to pursue growth (African Export-Import Bank, 2018; African Development Bank Group, 2019).

The importance of agriculture for industrialisation is evident in the role that the green revolution played, enabling countries to produce food cheaply, keep wages low, and become internationally competitive in labour-intensive manufacturing (Diao, Hazell and Thurlow, 2010). It was on the back of this agricultural development that countries like China, Thailand, and Indonesia grew their now world-class manufacturing industries (Henley, 2012). In contrast, many African countries have focussed their industrialisation policies on manufacturing alone (Ravallion, 2008), and as a result many countries have neglected the development of their agricultural industries. This neglect has left countries with high levels of agricultural imports, relatively low levels of food security and an overreliance on extractive exports. Furthermore, an under capacitated agricultural industry has also failed to support effective or sustainable manufacturing industrialisation (Henley, 2012).

More recently, agriculture has been seen as an independent route to economic development. Agriculture holds economic importance outside of its role in supporting manufacturing industries, largely due to the employment opportunities it provides, the rural development that it can drive, and linkages it creates within the economy (Black, Conradie and Gerwel, 2014; Fukase and Martin, 2018). It also drives the agro-processing industry, which directly marries the production of higher value-added products with the agricultural sector. The growth of agriculture could therefore provide pro-poor upgrading within the economy (Black, Conradie and Gerwel, 2014).

However, African countries have failed to support or promote pro-poor agricultural development (Henley, 2012). Instead, as in the case of Nigeria, they have generally tried to bypass agricultural development altogether. In the cases where agricultural policy has been rural-directed, these policies have still failed to be effective (Henley, 2012). This can be most clearly seen in the case of Kenya, which implemented policies intended to build rural agricultural industry, but failed to sustain them, or to prioritise poverty reduction over politically inspired projects (Ergas, 1982). Agriculture remains a key industry for many southern African countries, but has not been effectively prioritised by governments, or even treated as an important component of economic development and poverty reduction.

2.4.2 Agro-processing and its development potential

Agriculture presents important and promising opportunities for economic development in southern Africa. However, the production and export of higher value-added products, and the diversification of the economy, are still essential elements of growth for countries that remain reliant on natural resources (Morris and Staritz, 2019). The particular benefit of agro-processing is that it both allows countries to pursue upgrading through value creation and value-added exports, and it is often pro-poor in nature, allowing southern African countries to pursue both economic growth and broad-based socio-economic development (Black *et al.*, 2020).

Agro-processing is, simply, the process of adding value to raw agricultural products. It covers products from packaged fresh fruit and vegetables, to leather production. The scope of this paper requires a focus on food and beverage agro-processing, so the literature here is reflective of that branch of the agro-processing sector.

Economic advantages of agro-processing

Agro-processing has numerous economic linkages to industries that boost economic development. The strong linkages that agro-processing has to the agricultural industry are a given, but it also provides backward and forward linkages to farm equipment, logistics services, transport, financial services, and supermarkets, among other industries (Mazungunye, 2019). It also requires investment into essential services like electricity, and transport infrastructure. These up- and down-stream industries contribute to general economic development (Fukase and Martin, 2018).

Furthermore, agro-processing is an industry that aligns with southern Africa's production advantages. Southern African countries tend, on average, to have a surplus of labour, and relatively restricted access to capital. The labour-intensive, low-capital agro-processing sector can therefore be both a source of employment in southern African countries, and an industry that can produce competitively priced products (Owoo and Lambon-Quayefio, 2018). By boosting employment, spending in the economy increases and – provided people spend relatively more on domestic products than imported products – it is possible for higher levels of employment to have a significant multiplier effect. (Henley, 2012).

Developmental advantages of agro-processing

The other reason that promoting agro-processing growth in southern Africa is appealing is the high potential for the industry to be pro-poor and developmental in nature.

The employment intensity discussed above not only provides consumption and demand multipliers but is also directed toward social groups that typically struggle to find employment. Agro-processing is more likely than other employment-intensive industries to take place in rural locations, largely because of the rural production of the essential agricultural inputs (Mazungunye, 2019). This means that agro-processing is likely to provide employment opportunities in areas that would otherwise face high levels of unemployment (Watanabe, Jinji and Kurihara, 2009; Owoo and Lambon-Quayefio, 2018; Mazungunye, 2019). Rural communities in southern Africa have a high proportion of the more vulnerable and marginalised sections of the labour market – women and seasonal workers. This is labour that the agro-processing industry can absorb without creating high levels of urban migration or damaging agricultural industry's access to rural labour (Watanabe, Jinji and Kurihara, 2009). The employment offered by a strong agro-processing industry could therefore allow a reduction in rural unemployment without extreme urban migration and the potentially damaging impact of a drastic relocation of labour.

Additionally, agro-processing's strong linkages with the agricultural industry has the potential to grow the market for smallholder farmers' fresh produce. This would distribute the income from the increased demand for agricultural products to rural communities and farmers (Watanabe, Jinji and Kurihara, 2009). This presents an opportunity to grow smallholder farmers' businesses and consolidate a strong agricultural industry (Parshotam and Diez, 2019). However, this aspect of agro-processing's developmental nature must come with a caution. Without smallholder development programmes and an active effort to direct the benefits of agro-processing to smallholder farmers, the industry would likely rely on products from large-scale farming due to for their high quality and production quantities. This would result in agro-processing driving growth of large agricultural producers and would not distribute the benefits of development as effectively (Weatherspoon and Reardon, 2003; Mather, 2005; Louw *et al.*, 2007; Muchopa, 2013). If the development of the agro-processing industry is accompanied by careful government direction, it has the potential to promote smallholder farmer development, but if mishandled, it could direct the growth to a few large farms and undermine the security of smallholder farming.

Agro-processing provides the opportunity to pursue value-added production in southern Africa. This facilitates upgrading, has strong forward and backward-linkages, and benefits from the presence of a strong agricultural industry. Additionally, it offers a form of economic growth that could be pro-poor and developmental, by providing employment and income to the rural, marginalised labour market and, if policy is well designed, growth opportunities for smallholder farmers.

2.4.3 The state of agricultural trade and RVCs in southern Africa

Trade is an essential aspect of any country's economy, as is discussed in the section on value chains above. It is particularly important for many southern African countries, which have small populations and therefore limited domestic markets for their products. However, the state of trade in southern Africa, and in Africa more broadly, is severely constrained and presents a significant challenge to the development of industries in each country, as well as of RVCs that could promote economic growth.

While Africa is linked into global trade, its exports tend to be primarily in natural resources and raw commodities. This means that in 2018, despite a high level of trade participation, the whole continent of Africa only held a 2.7% share of global trade, a number which is slightly higher than in 2016, but lower than Africa's proportion of global trade in 2015 (African Export-Import Bank, 2018: 58). Intra-regional trade is also weak but has a higher proportion of value-added products than its global trade (African Development Bank Group, 2019). While a significant proportion of this can be attributed to South Africa's value-added trade with the rest of the region – South Africa exports far more than it imports from the region, creating trade challenges between southern African countries – it remains indicative of the potential for the regional market to drive upgrading where the global market fails to do so (Banga and Balchin, 2019).

However, intra-regional trade's potential is heavily reliant on an improvement in the intra-regional trade balance (Black *et al.*, 2019). South Africa's ongoing economic dominance in the region, and its largely one-way exporting of value-added products to the rest of the region, could prevent the easing of trade barriers between southern African countries and significantly weaken the region's ability to grow and upgrade through RVCs (Scholvin, 2016). While trade is not (and should not be) perfectly balanced, reducing this trade imbalance to a manageable level is pivotal for developing intra-regional trade.

While South Africa is dominant throughout all industries in southern Africa, this trade imbalance is exaggerated in the agro-processing industry (Weatherspoon and Reardon, 2003). South Africa is also the only country in the region with agriculture dominated by large farmers, rather than smallholder farmers, which makes its products particularly attractive for agro-processing and eventually sale in supermarkets (Banga and Balchin, 2019). This results in South Africa providing higher value-added agro-processed products to the rest of southern Africa, partly through the dominance of South African supermarkets in the region. In return, South Africa imports very limited amounts of agro-processed – and unprocessed agricultural – products from southern Africa (Black *et al.*, 2020).

Value chains in agriculture and agro-processed goods are also limited by the trade blockages faced at borders in Southern Africa. The slow movement of goods, both within and between countries, means that freshness of agricultural products is extremely difficult to ensure (Vilakazi, 2018). Double border crossings and uncoordinated bureaucratic processes increase the risk and expense of the cold chain necessary for the successful trade of agricultural products (Vilakazi, 2018). As a result, the development of RVCs that produce agro-processed goods has been stymied in southern Africa, further reinforcing South Africa's dominance and limiting the regional economic benefit provided by both RVCs, and the industry-specific benefits of agro-processing activities.

There are regional policies in place which aim to encourage regional integration and drive development. The SADC Industrial Policy (2015) explicitly aims to revitalize regional integration as a cornerstone of "collective development" (SADC Industrial policy, 2015, 7). This involves encouraging governments to align policies, rationalize key systems such as Rules of Origin, and action FTA rules in a genuine effort to encourage trade. It also speaks to reducing key constraints, including infrastructure, energy, and transport. Finally, it argues for a prioritization of agro-processing as a key link between agricultural activities and industrialization of the SADC countries. However, this strategy has lacked effectiveness in the region due to a variety of factors. Limited commitment to the shared vision outlined in the SADC industrial policy, particularly from South Africa, has severely limited the effectiveness of the industrialization strategy (Andreoni *et al.*, 2021). Regional policies supporting industrialization and agro-processing are in place, but have so far had a limited impact on the development of RVCs in Southern Africa.

Although Arndt and Roberts (2018) find that successful implementation of industrialization strategy in SADC has been limited, they note that there is a key role for supermarkets to play in driving route-to-market, and investing in distribution and logistics, if they source domestically and invest in two-way intra-regional trade. They note that a significant challenge to supermarkets' role in developing regional trade has been market failures that limit supermarkets' investments – specifically, the fact that supplier development benefits all supermarkets, not a particular chain. There is therefore room for a regional approach to addressing this kind of market failure that, should plans like the SADC industrialization strategy be successfully implemented, could provide significant economic and developmental gains to the region.

The potential benefits of agro-processing and agricultural-centric trade in southern Africa call for further investigation into how the benefits of both regional trade and agro-processing can be shared more equitably throughout the region. Odijie (2018) argues that to account for the disparate market sizes in different countries a balance in industrial policy, and coordination between regional governments, is essential. Growing industries in smaller countries that are able to produce for a regional market can allow a country to export higher value-added products, building off these products to grow their economies (Black *et al.*, 2020) How to pursue these goals is a significant challenge faced by all the governments of southern Africa.

Further investigation of the state of regional trade is necessary in order to understand how trade with South Africa relates to the rest of the region, how the development of certain products and industries has unfolded, and how the region has grown and changed relative to the rest of the world. Then, solutions that promote developmental regionalism, encourage industries with a competitive advantage, and facilitate pro-poor development must be scrutinised in order to promote better trade integration and more promising upgrading opportunities.

2.5 Overcoming trade challenges

There have been many solutions proposed for addressing and overcoming the significant challenges to trade and upgrading that southern Africa faces. Some have been implemented, with varying degrees of success, but there is still significant scope for innovation in regional agricultural development.

2.5.1 Supermarkets – opportunities and challenges for pro-poor development

A complex yet promising development in agriculture and agro-processing is the growth and expansion of supermarkets throughout the southern African region. These create opportunities for the development of RVCs that connect farmers to the larger southern African market, while developing linkages into other sectors such as logistics, infrastructure development, marketing, and financial services. The expansion of supermarkets in the region has almost entirely been driven by South African food retailers' expansion.

The initial growth of supermarkets in South Africa was due to country-specific factors that enabled successful centralisation of food products. The demand for processed agricultural products is correlated with higher incomes, and South Africa's relatively high GDP per capita meant that the country experienced demand for processed food products before other countries in the region (Banga and Balchin, 2019). Additionally, the dominance of large-scale agriculture in South Africa served supermarkets' demand for high quantities and consistent quality. Large agricultural producers had access to the finances required to engage in the credit-based contracts that are widely used by supermarkets (Das Nair and Chisoro, 2015). These factors have meant that South Africa developed a dominant and concentrated food retail industry before the rest of the region.

The expansion of these South African supermarkets into the rest of the region was led by Shoprite (Das Nair, 2018), but since then almost all South Africa's main supermarket chains have developed a regional presence. Growing incomes in the region have created a growing demand for processed foods, increasing demand for the kinds of services and products that supermarkets can provide. While there are other supermarket chains present in the region, many of the international chains have struggled to sufficiently understand the market and have therefore had less success than they had in East African countries (Das Nair, 2018). Choppies, the Botswanan supermarket chain was initially very successful, but has recently closed a significant number of branches in the face of internal challenges (Njobeni, 2019). Although supermarkets are unlikely to hold as large a market share in the rest of southern Africa, they remain important players. South African supermarkets have therefore remained the dominant formal food retailers in many countries the region.

This regional dominance of South African supermarkets has contributed to the trade imbalance discussed above, and the growing 'supermarketization' of the region has changed how smallholder farmers can engage with the market (Louw *et al.*, 2010; Black *et al.*, 2019, 2020). However, growing supermarket access does offer the opportunity for growth in agro-processing by providing access to a large regional market. The growth in the industry offers significant positive outcomes, like improved productivity, increased consumer choice, and increased levels of food safety due to improved standards and regulations for items being sold (Nickanor *et al.*, 2017).

Mather (2005) argues that supermarkets present significant challenges to small farmers and producers, particularly through their sourcing practices. Especially in South Africa, small food producers have tended not to supply supermarkets (Louw *et al.*, 2007). However, the number of small producers supplying supermarkets have increased over the past decade, as supermarkets have become more entrenched in buyers' habits, pushing small producers to fight for space on supermarket shelves. For small producers to have access to supermarkets, and therefore to national or regional buyers, is far more challenging than for large food producers, and many small suppliers are excluded from the markets (Mather, 2005). The key requirement for supermarkets' sourcing process is that suppliers can supply consistent, relatively high quantities, at high quality, to a distribution centre (DC). Additionally, supermarket contracts often require suppliers to accept extended payment terms that result in being paid months after the product is delivered (Mather, 2005). Small producers and SMEs tend not to have access to the credit required to engage in contracts like these, or the ability to invest in facilities that produce at the scale and quality demanded by supermarkets. SME agricultural and agro-processing producers are therefore at a disadvantage in a supermarket dominant agricultural industry and benefit less from the presence of supermarkets than large producers do.

An additional challenge is the skewed market power held by supermarket chains that can create the significant buyer power discussed above. As noted in the Competition Commission's Grocery Retail Market Inquiry (2019), the current market structure in South Africa has resulted in significant barriers to entry for independent and emerging retailers in the supermarket space, as well as highly constrained conditions for suppliers with limited bargaining power or flexibility. This indicates that for supermarkets to contribute toward supplier development, the significant market power currently held by supermarkets in Southern Africa will likely need to be disrupted (Competition Commission, 2019).

However, Mather (2005) also argues that the system does offer opportunities for growth through the complex structures of the retail market – especially the existence of franchise stores that are able to facilitate 'shelf space' for small producers without undergoing the rigorous and costly process necessary to become a listed supplier at a supermarket. The existence of franchise stores may allow small producers to incrementally grow their business and begin to take on the challenge of supplying to supermarkets, without having to make the very large initial investments required to become a listed supplier (Louw *et al.*, 2007).

2.5.2 Supplier development programmes

For the challenges presented by supermarkets to small producers and smallholder farmers to be overcome, and the potential benefits of franchising systems and other promising avenues of development to be optimised, the food retail systems in southern Africa need to be closely examined. These systems need to be addressed while taking into consideration the trade challenges faced by southern Africa as a whole.

Supermarkets have been seen as an opportunity for regional suppler development. Black et al (2019) find that supermarket chains that are actively invested in developing local suppliers for their regional branches can have a positive impact on smallholder producers and can create upgrading opportunities. However, South African supermarket chains have tended to rely on South African products being imported into the region. This transport is often inefficient, with their trucks returning from neighbouring countries empty, an indicator of of one-way trade (Vilakazi, 2018). This means that supermarkets have an incentive to develop local suppliers in southern Africa in order to reduce transport costs as well as spread supplier risk by preventing the retailers from being overly reliant on a single region for products (Black *et al.*, 2020). Furthermore, Shoprite's experience of using local suppliers in order to best provide products that are suitable to local culture and tastes (Das Nair, 2018), has provided evidence that local supplier relationships can be highly beneficial for retailers, as well as suppliers.

However, these benefits are only successful if the suppliers in southern African countries can produce competitive products at sufficient quantities and quality, as well as managing the long payment times required by supermarkets. In order for small farmers and suppliers to develop and grow to the point where this is possible, supermarkets need to actively commit to smallholder farmer development, long-term partnerships, and initial assistance and support through the upgrading process (Black *et al.*, 2019). This commitment must be coupled with strong government policy supporting smallholder farmer and SME producer development, ensuring that large supermarket chains do not abuse their buying power over the small suppliers (Black *et al.*, 2019). Multi-stakeholder engagement and careful policy planning and implementation is necessary for the benefits of the supermarket revolution in southern Africa to produce pro-poor and developmental outcomes.

This kind of coordinated effort to drive engagement South African retail firms to engage in southern African development requires a clear understanding of when supplier development programmes work. Policy needs to be carefully formed in order to avoid it becoming a barrier to trade, rather than easing the trade balance between countries (Black *et al.*, 2020). The recent implementation of the Namibian Retail Charter prompted commitment from Woolworths to source half of its fresh produce from local suppliers. The fact that the charter is voluntary has prevented the government drive toward local supplier development from dampening trade rather than growing local industry (Black *et al.*, 2019). It should be noted that this kind of intervention can increase regional market access but is still challenging and will require some level of creative destruction as countries' industries adapt to lower intra-regional protection. While this should not inhibit the pursuit of regional integration, it is an important challenge to acknowledge, and to curtail.

The role that supermarkets have to play in southern Africa's agricultural and agro-processing retail is becoming increasingly central (Frayne *et al.*, 2010) and the concentrated market dominated by South African firms means that careful policy creation and multi-stakeholder engagement is required in order to ensure that these companies can play a role in the region that is both beneficial to their own business interests, and has developmental and pro-poor impacts (Black *et al.*, 2020). The implementation of supplier development programmes has potential as a mechanism through which countries can upgrade their agricultural and agro-processing industries, gain a larger regional market through sales to supermarkets, and through which those involved in the food retail market can spread their risk and improve their transport and trade efficiencies (Das Nair and Landani, 2019). Smallholder farmers and SME food processors can grow their businesses, but only through systems and structures which allow them to incrementally grow their relationships with supermarkets, like franchising and supplier development programmes (Mather, 2005; Das Nair and Landani, 2019). This would allow these small businesses to gradually adjust to the costs, investments, and requirements involved in supplying supermarkets, rather than having to make large, risky, investments up front.

The role that supermarkets can play in supplier development is not straightforward but remains valuable. There is very limited research around the impact that food retail outside of supermarkets could have on supplier development.

2.6 Conclusion

The development of regional value chains in southern Africa, and the focus on developing agricultural and agro-processing sectors could allow for upgrading opportunities, provide strong linkages, and produce pro-poor and developmental income and employment creation. A focus on these sectors, and careful government policy directing their development, could lead to increased levels of value-added trade – particularly within the southern African region – and therefore could allow southern African countries to pursue both developmental and economic growth objectives.

However, there are serious challenges that need to be overcome for this potential to be realised. The ongoing trade barriers, particularly in the form of NTBs, continue to prevent RVCs that are effective, affordable, or that can make use of industry specialisation across countries. This is particularly the case with agricultural and agro-processing RVCs, which are highly reliant on quick transportation of products under cold-chain conditions. Furthermore, South Africa's ongoing trade dominance of the region has perpetuated and reinforced the region's resistance to more integrated trade and the creation of value chains. Smaller economies in the region are unwilling to liberalise further, or reduce NTBs, for fear that South Africa's more developed products will out-compete their domestic industries, reducing their value-added production, trade, and subsequently their ability to develop.

Research has been done on multiple industries that could provide some of the driving force behind growing RVCs, which could allow countries to reduce their trade barriers and grow value-added trade within the region. Supermarkets have been among the most promising of these industries, but they must overcome extreme dominance by South African producers, as well as the tendency of the food retail industry to favour large farmers and producers over the smallholder farmers and SME producers that dominate southern Africa outside of South Africa.

To capitalise on the development and pro-poor potential of the agricultural and agro-processing industries, it is necessary to more clearly understand the state of trade of these goods within the region. Understanding how agricultural and agro-processed products are produced and traded within the region will shed more light on where the challenges of the system lie in creating successful and resilient value chains. It is also important to specifically unpack the process that supermarkets undergo in their supplier development programmes, as well as growing research on the role of other food retailers like independent retailers, spaza shops, restaurants, catering companies, etc. This may show the gaps where multi-party engagement and careful policy development could promote a food retail market that upgrades smallholder farmers and SME producers, and promotes a growth stimulating regional market.

3. TRADE IN SOUTHERN AFRICA: TRENDS AND GROWING CONCERNS

3.1 Introduction

Trade in southern Africa, as discussed above, has been key to many countries' growth strategies. However, it has also faced severe challenges within the region, as well as the rest of the world. Understanding how southern Africa's trade currently works, how it has developed or stagnated over the past decade, and which products have thrived or struggled in the region, is an essential step in developing policies that promote improved trade in the region, the development of RVCs, and regional economic development. This analysis aims to unpack the role agriculture and agro-processing trade has been able to play in economic upgrading within southern Africa, and whether this trade has promoted or prevented successful regional integration.

This section examines the exports of agricultural commodities and processed agricultural goods from the region and trade within the region. First, there is a review of the methodology behind the data analysis used. Subsequently, there are three main dimensions of southern African trade to consider. First, an analysis of the growth in exports from the countries of southern Africa to the world and to the rest of the region, and what it indicates about trade from southern Africa is presented. Second, the data unpacks the question of South Africa's trade imbalance with the rest of southern Africa and the intra-regional dynamics of countries' power and economic dominance. Third, this section explores the extent to which there has been a shift to more highly processed agricultural products, what role processed agriculture has played in the region, and the importance of domestic value-addition in products. These issues build a picture of the trade circumstances in southern Africa – specifically the state of RVCs and production in agriculture and agro-processing – and contribute a perspective for policy creation relating to agriculture, regional growth, and socio-economic reform.

3.2 Data and methodology

The data used for this part of the analysis is sourced from the United Nations Comtrade Database. The data covers the years 2003 to 2018, and provides detailed trade data by country, trade partner, and product code at the 2- and 6-digit level. Where countries have not reported trade data for a particular year, mirror data is used to estimate their trade values with imports reported by the rest of the world for that country substituting as its exports for that year and that product line. This is not a perfect substitute for reported export data, but allows for a comprehensive picture of the region.

The focus is on the southern African region, and the countries included in the analysis are Angola, Botswana, eSwatini (previously Swaziland), Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia, and Zimbabwe. The focus on this group of countries is due to their engagement in regional agricultural trade, and the supermarketization of the region, as discussed in the third chapter of this dissertation.

For this analysis of gross exports, harmonised system (HS) codes have dictated the classification of products we have used. Agricultural products are products with a 2-digit level HS code from 1 to 24. Since this study aims to understand how trade in food and beverage-based agro-processed goods has been conducted and can be promoted, the HS codes 15-24 are used to define processed agricultural products within the general agricultural product grouping. This follows the method used by the Department of Agriculture, Land Reform, and Rural Development (2018/9). This definition excludes HS codes of processed agricultural products for use in the textiles or furniture industries. It is worth noting that this classification does exclude a few processed products in the earlier 'agricultural' HS codes 1-14. However, this definition ensures consistency and enables replicable analysis and clarity in the discussion, and its scope is accurate enough that the results remain sound and applicable. Additionally, the analysis does not consider or include re-imported or re-exported products. For simplicity and clarity, only trade reported as imports and exports are included.

The methodology in this section aims to create a holistic picture of how southern African trade has unfolded over the past ten years, and use data to depict the imbalanced trade, the goods that are the most traded, and the role of agricultural in regional trade.

3.3 Southern Africa's agricultural trade

Table 1 shows the significance of agricultural trade to each of the southern African countries, reflecting the values (US$ million) of trade in agricultural products for each country, while Table

2 shows the proportion of this trade in the country's total trade, for the years 2003, 2010 and 2017[11]. The results show that trade in agricultural products varies significantly between countries. South Africa's large economy means that its import and export quantities are significantly higher than other countries in the region. All the countries in the region, other than Angola, Botswana, Lesotho, and Mozambique, were net exporters in 2017.

Table 1: Value of agricultural trade (US$ million) between southern African countries and the world

Country	Exports					Imports				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	2003	2010	2017	% change from 2003 to 2010	% change from 2010 to 2017	2003	2010	2017	% change from 2003 to 2010	% change from 2010 to 2017
AGO	17	57	295	235	415	1110	5600	5660	405	1
BWA	181	477	211	164	-56	1110	1420	1330	28	-6
LSO	83	167	55	101	-67	446	538	760	21	41
MOZ	357	696	1020	95	47	481	840	1710	75	104
MWI	867	1640	1590	89	-3	274	581	632	112	9
NAM	1240	2920	2340	135	-20	430	1810	1860	321	3
SWZ	512	611	936	19	53	491	417	616	-15	48
ZAF	6590	17000	19700	158	16	3550	11300	13500	218	19
ZMB	245	901	1200	268	33	419	522	1020	25	95
ZWE	1140	1220	1980	7	62	454	2140	1480	371	-31

Notes: Mirror data used for Angola in 2003 and eSwatini in 2010. The three-digit country classifications in parentheses for each country are Angola (AGO), Botswana (BWA), eSwatini (SWZ), Lesotho (LSO), Malawi (MWI), Mozambique (MOZ), Namibia (NAM), South Africa (ZAF), Zambia (ZMB), and Zimbabwe (ZWE).

Source: Authors' calculation based on UN Comtrade Data.

[1] These years were chosen because they allow a clear picture of change in the region over the period being examined, while also utilising as little mirrored data as possible, ensuring a more accurate picture.

Table 2: Agricultural trade between southern African countries and the world as a proportion of total trade (%)

Country	Exports					Imports				
	(1) 2003	(2) 2010	(3) 2017	(4) % change from 2003 to 2010	(5) % change from 2010 to 2017	(6) 2003	(7) 2010	(8) 2017	(9) % change from 2003 to 2010	(10) % change from 2010 to 2017
AGO	0.2	0.1	0.4	-69	676	25	15	18	-38	19
BWA	2	5	2	114	-65	14	13	13	-11	1
LSO	9	17	4	92	-76	20	21	18	5	-13
MOZ	17	16	11	-9	-30	14	12	15	-14	27
MWI	86	77	90	-11	18	17	13	12	-23	-7
NAM	48	25	22	-48	-10	15	15	14	-1	-9
SWZ	15	31	26	100	-16	17	20	19	17	-3
ZAF	10	10	11	-1	8	5	7	8	32	20
ZMB	12	6	7	-48	18	13	5	6	-62	19
ZWE	38	19	28	-49	48	21	18	15	-14	-18

Notes: Mirror data used for Angola in 2003 and eSwatini in 2010

Source: Authors' calculation based on UN Comtrade Data.

The variation in the importance of agricultural trade across countries is significant. Exports of agricultural products only made up 0.4% of Angola's total exports in 2017, while Malawi's agricultural exports were 90% of its total exports, with a broad range for all the countries in between. Agricultural imports have less variation but are a significant proportion of total imports – above 15% – for most countries. Only South Africa and Zambia have shares below 10%. This high demand for agricultural imports indicates an opportunity for these countries to tap into their own markets – and the regional market – for agricultural products. There is substantial variation in share of exports that agricultural products hold, and for many of these countries agricultural trade makes up a substantial proportion of their overall trade. This indicates that investment in the industry may constitute an opportunity to supply their own domestic markets. It also shows that regionally, agriculture is important but complex and variable.

Tables 1 and 2 also reflect the different levels of growth in agricultural trade for each of these southern African countries. Again, there is substantial variation in how successfully these countries have grown their agricultural trade. Between 2010 and 2017, six of the countries have grown the value of their agricultural exports, while four have lost value. Angola experienced the highest level of growth from 2003 to 2017 but did so off an extremely low base. This significant increase was mostly in line with the country's overall economic growth as shown by agriculture's proportion of trade across the years. Swaziland and Zimbabwe[2] both experienced a growth of over 50% in their exports, while South Africa, Mozambique, and Zambia also experienced more moderate growth. Conversely, Botswana and Lesotho have both seen significant drops – over 50% – in the value of their agricultural exports, while Malawi and Namibia experienced less extreme decreases. Interestingly, change in the share of agricultural exports, including agro-processed products, does not track exactly with the level – agricultural exports make up a higher proportion of Malawi's exports despite decreasing in value, while eSwatini's[3] agricultural industry has grown in value but has lost ground in its share of exports, indicating that other exported products have grown faster than agriculture. This kind of variability in economies is essential to be aware of when engaging in the data and investigating the state of exports.

Importantly, these tables only reflect values from three distinct years, and there is volatility in export values for many of these countries[4]. However, this data still demonstrates important features of southern African agricultural trade. There is significant heterogeneity across these countries, both in terms of absolute growth of the industry and in how the industry has grown relative to the overall trade economy. This volatility is evident in the difference between the values in columns 4 and 5, and 9 and 10, in each table. They show that across years, there is substantial fluctuation. Some countries have consistently grown their agricultural exports, but many have experienced some fluctuation in the level of their agricultural trade. This volatility across years, and variance in growth across countries – which is driven by regional challenges including drought, poor soils, outdated technology, weak support services, poor infrastructure, etc. – demonstrates that agricultural trade from southern Africa is far from a stable industry, despite its importance to many of these countries, and its potential importance to the region as a whole.

Southern Africa's agricultural trade with the world does not indicate a strong or growing industry, and instead shows that each country has a variety of individual challenges that limit growth in agricultural trade. Intensive investment in agricultural trade from countries like Chile, Peru, China, and many others has taken the form of growing research and development (R&D) budgets, infrastructure investments, and international trade negotiation. However, in the case of South Africa, R&D investment has been stagnant since the 1990s, infrastructure is lagging behind, and there are still severe trade barriers that we have failed to navigate (Cramer and

[2] Zimbabwe's trade data should be used cautiously, as it is widely regarded as less reliable than the reporting of the rest of the countries in this sample

[3] It should be noted that this analysis uses mirror data for eSwathini's in 2010, and is therefore not as reliable as other numbers in the table

[4] Appendix A shows the export values and shares for these countries for each year between 2010 and 2018.

Sender, 2015). These kinds of challenges are faced across southern Africa, often far more severely. However, the variance between countries in the region, and across the years, indicates how important individualised solutions and policy making will be.

3.4 Intra-regional trade and South Africa's trade balance

The role that trade plays within the region is different to that of global trade and has the potential to be more important for development. Table 3 shows indicators of the role played by agricultural[5] trade within southern Africa, including regional agricultural exports as a proportion of exports to southern Africa (column (1)), the agricultural exports going to southern Africa as a proportion of agricultural exports (column (2)), agricultural exports to South Africa as a proportion of agricultural exports to the region (column (3)), and agricultural exports to southern Africa as a share of all agricultural exports within the region (column (4)).

Table 3: Intra-regional agricultural trade in Southern Africa (US$)

	(1) Regional agricultural exports as a proportion of exports to southern Africa			(2) Agricultural exports going to southern Africa as a proportion of agricultural exports			(3) Agricultural exports to South Africa as a proportion of agricultural exports to the region			(4) Agricultural exports to southern Africa as a share of all agricultural exports within the region		
Country	2003	2010	2017	2003	2010	2017	2003	2010	2017	2003	2010	2017
AGO	18	0	1	9	0	3	27	0	16	0.04	0	0.2
BWA	7	19	8	14	34	28	93	78	88	2	3	1
LSO	44	22	7	50	50	43	100	99.9	99.9	1	2	0
MOZ	28	14	15	20	11	15	32	57	70	1	2	3
MWI	59	53	61	7	6	5	84	38	50	2	2	1
NAM	43	34	28	25	28	25	52	74	74	11	16	10
SWZ	29	24	24	44	43	37	86	96	91	4	5	6
ZAF	20	18	18	9	19	17	-	-	-	55	63	58
ZMB	18	23	29	20	24	18	39	18	23	8	4	4
ZWE	21	9	36	13	14	48	38	39	83	16	3	16

Notes: Mirror data used for Angola in 2003 and eSwatini in 2010.

Source: Authors' calculation based on UN Comtrade Data.

The first two columns indicate the important role that the region plays for many of these countries' agricultural industries. Agricultural exports to the region make up a high proportion of intra-regional exports, as well as a high proportion of total agricultural exports, particularly for countries with large agricultural industries, such as Malawi or Namibia. Furthermore, only two countries have agricultural exports to the rest of the world that are higher than the share of their agricultural exports to the region (Table 2 indicates exports shares), which can also be seen in column (2)'s relatively high shares of agricultural exports that remain within southern Africa.

However, intra-regional agricultural exports have not grown as significantly as might be expected from a region that is pursuing regional integration and improved trade. While there is evidence

[5] It should be noted that for this analysis, agriculture includes agro-processed products unless otherwise specified

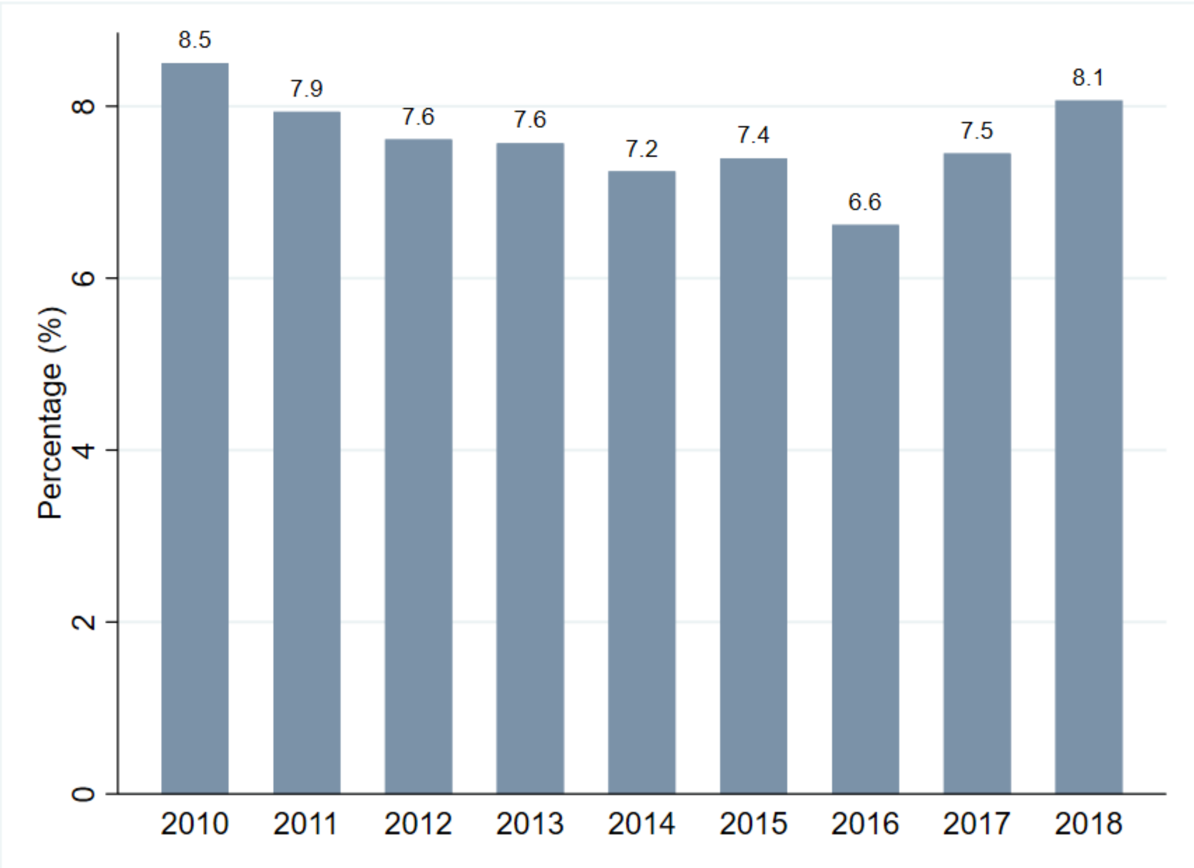
of growth between 2003 and 2010 for Botswana, Lesotho and South Africa, there is no clear indication of growth for the majority of countries across the given time period, which is surprising considering these countries' participation in an FTA that actively promotes the growth of regional trade. Of course, if countries' external exports were growing more, there could still be growth in regional agricultural exports, but this is not the case for the majority of these countries. The share of agricultural exports to the region of total agricultural exports has stagnated, or has weakened, for most of these countries, which does not align with the growth potential that the industry in the region could have.

Furthermore, column (3) shows that a large majority of agricultural exports to the region are sent to South Africa. South Africa accounts for an average of 66% of each country's intra-regional agricultural exports, and over 88% of Southern African Customs Union (SACU) countries' intra-regional exports in 2017. Both of these averages have increased since 2003 – and SACU's average also went up in 2010 – showing a growth in South Africa's regional dominance rather than a balancing out of trade. This indicates that while agricultural trade may be more important regionally than it is globally to many southern African countries, this is primarily due to South Africa's demand for these countries' exports. South Africa's demand is growing slowly, in line with its slow economic growth over the past decade, which makes this reliance a cause for concern. Agricultural exports to the rest of the region are not significant enough to drive agricultural trade without South Africa's involvement.

The last column, column (4), also demonstrates the extremely unbalanced nature of agricultural trade within the region. South Africa's share of the gross intra-regional agricultural exports is just under two thirds in 2010, has remained above half in 2017 and is still higher than it was in 2003. This is indicative of seriously unbalanced trade in the region. It is an important market for most of these countries' agricultural exports, but South Africa also has a significant trade surplus with the rest of the continent. This is partially due to South Africa's economic size, but even so, the reliance on a single economy is a cause for concern, especially since South Africa's economy has been stagnating. In 2018, South Africa's agricultural exports to the region amounted to US$3.3 billion with imports of only US$1.09 billion up from US$3.25 billion and US$0.96 billion in 2010. This persistent and large trade surplus presents two key challenges to the growth of agricultural industry, and the development of regional integration, in southern Africa.

First, the ongoing and significant trade imbalance indicates that the South African market has not been used as an opportunity for the development of industries in other countries. The large surplus demonstrates a potential opportunity for food producers in other southern African countries to provide for their own domestic markets, as well as regional markets (Afreximbank, 2018). The presence of a large economy in the region should provide opportunities for surrounding countries to develop industries that can take advantage of the market and use it to grow. Figure 1 below shows that despite South Africa being a dominant exporter in the region, it does not rely strongly on agricultural imports from other southern African countries, and only about 8% of its agricultural imports have been sourced intra-regionally, and even less in some years, further demonstrating the inability of southern African countries to engage in South Africa's large market for imported agricultural goods.

Figure 1: South Africa's agricultural imports from southern Africa as a proportion of total agricultural imports



Source: Authors' calculation based on UN Comtrade Data.

Second, a trade imbalance as severe as this presents a political challenge to the process of integration, thus creating a barrier to the growth of industries in the region. The dominance of a market can create tension in the region and more protectionist trade policies in an effort to protect other countries' smaller industries (Black et al, 2019). This prevents a move toward successful regional integration that overcomes existing non-trade barriers and might allow the development of RVCs and access to South Africa's large market.

The failure of the region to create a growth environment for the agricultural industry, and South Africa's ongoing dominance of agricultural trade, indicates that, for southern African countries to develop regional agricultural industries through trade, significant changes must be made. These must include how the region is integrated and whether the South African economy is able to offer opportunities through its large market rather than barriers through its trade dominance.

3.5 The role of agro-processing in southern Africa's agricultural industry

3.5.1 The promise of agro-processing

Agro-processing has the potential to develop RVCs, as discussed in section 2, and the relative importance of it to the region indicates there is potential for success through this development path. This analysis until now has been focused on all agricultural products, but the importance of agro-processing necessitates a more detailed look at regional agricultural trade.

Table 4 below shows the role that the agro-processing industry played in intra- and extra-regional trade in 2017, presenting information on the trade of raw and processed agricultural products. Agro-processing plays a significant role for these southern African countries. For half of them, agro-processing exports to the region have a higher value than raw agricultural exports. The size of this gap varies, with Eswatini having a particularly large share of agro-processed products.

This significance of agro-processing is even more pronounced regionally. Agro-processing's share of total exports to the region is higher on average than its share of total exports outside of the region. This can be seen in the ratios in columns (3) and (6), which show that agro-processing is more important relative to raw agricultural exports intra-regionally than it is externally. The only countries for which this is not the case are Angola, which has a very small agricultural industry, and Malawi, which has a very dominant tobacco industry and exports most of this internationally. This indicates that although agriculture in southern Africa has had a disappointing growth performance and requires regional change, agro-processing could still present an opportunity for economic development. This is also true for manufactured products, further bolstering the benefits of successful regional integration (Black *et al.*, 2019). If the challenges mentioned above are addressed, regional trade presents the best opportunity for agro-processing to grow value-added exports and develop stronger economies.

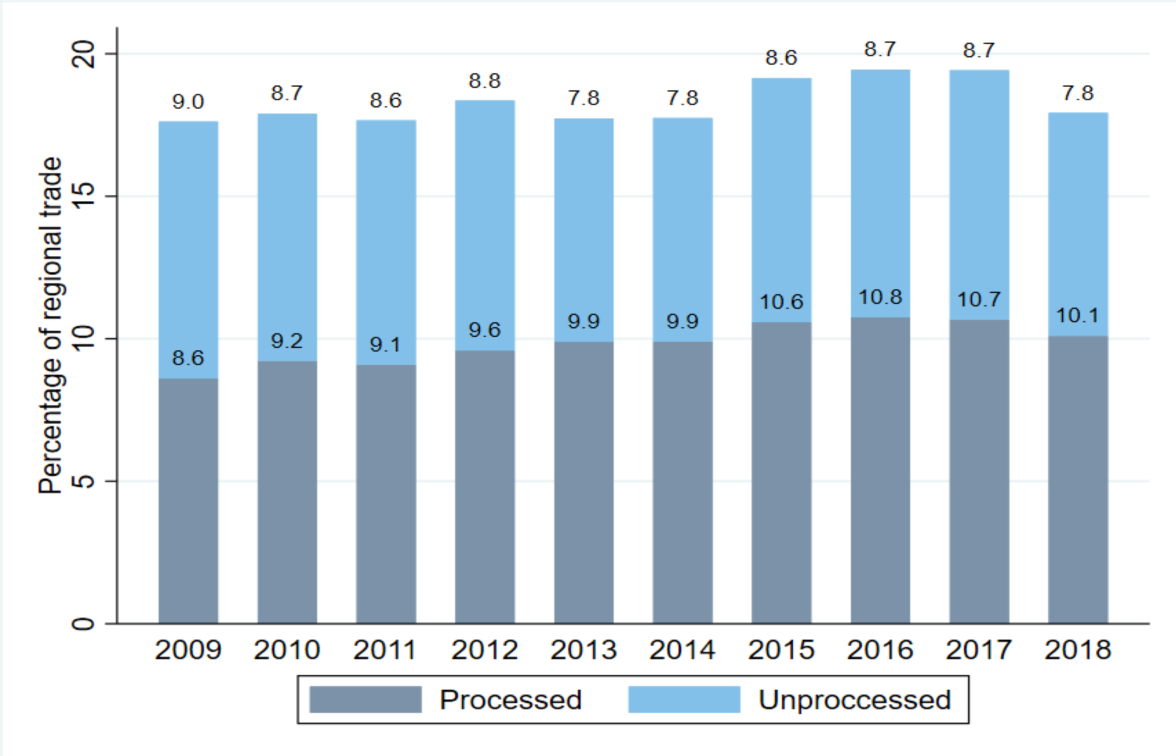
Table 4: Relative importance of types of agricultural products to intra- and extra-regional trade in 2017

Country	Exports to the region as a share of total exports to southern Africa			Exports outside the region as a share of total exports to the rest of the world		
	(1) Agro-processed exports	(2) Raw agricultural exports	(3) Agro-processed-to-raw ratio	(4) Agro-processed exports	(5) Raw agricultural exports	(6) Agro-processed-to-raw ratio
AGO	0.1	1	0.2	0.2	0.2	1.3
BWA	2	6	0.2	0.1	1	0.1
LSO	2	5	0.4	1	2	0.3
MOZ	9	6	1.6	6	4	1.3
MWI	20	41	0.5	77	16	4.7
NAM	6	22	0.3	2	19	0.1
SWZ	24	1	34.0	26	2	16.9
ZAF	10	9	1.2	4	7	0.5
ZMB	17	12	1.5	4	3	1.5
ZWE	33	3	12.4	21	2	9.3

Source: Authors' calculation based on UN Comtrade Data.

The region has also demonstrated some growth in the agro-processing industry. Figure 2 shows the percentage of regional agricultural trade in processed and unprocessed goods over the past decade, and indicates a slight increase in the proportion of processed products from 8.6% of regional trade to 10.1%. This change was accompanied by a small decrease in the share of regional trade in unprocessed agricultural goods, from 9% to 7.8%. This shows that, to a small extent, regional trade is already allowing growth through agro-processing development, and that the industry can provide growth, despite the challenging agricultural trade environment. Box 1 below shows how a strong agricultural industry lead to a growth in agro-processing in Thailand, and how the industry can subsequently support effective development and upgrading.

Figure 2: Processed and unprocessed agricultural trade within southern Africa as a percentage of total regional



trade

Notes: Some years have missing data for individual countries, and therefore these figures are representative of trends in the region, but should be further investigated with more complete data

Source: Derived from UN Comtrade Data.

Box 1: Thailand's agricultural trade

This importance of regional trade for the continued growth and support of agriculture and agro-processing has been shown by other countries that have undergone industrialisation as a result of a supported agricultural industry. Thailand's export figures between 1990 and 2018 provide an interesting comparison with a country that has successfully undergone the 'green revolution' and has prioritised economic development in agriculture. Thailand's green revolution largely centred around the development of higher quality rice production at higher quantities (Rerkasem, 2007). Processes like parboiling rice, and the development of genetically superior grains, meant that Thailand could increase both quality and quantity of their rice production, allowing the country to develop multiple forwards- and backwards-linkages (Watanabe, Jinji and Kurihara, 2009). Although not everything about the green revolution was perfect – the environmental impacts of the process are still being managed today (Rerkasem, 2007) – it produced economic development, led to a reduction in poverty, and allowed Thailand to grow its exports into higher value-added products (Talerngsri and Vonkhorporn, 2005; Watanabe, Jinji and Kurihara, 2009).

Box 1 continued:

Tables 5 and 6 below show the importance of Thailand's regional grouping – ASEAN – played as a market for agricultural and agro-processed exports. Table 5 shows how Thailand's agricultural exports have dropped significantly as a proportion of total exports, as the country has moved toward manufactured exports, although the overall value of agricultural exports has still grown. Agro-processed exports to the world have also dropped in their share of Thailand's exports, but not as significantly as agricultural exports, and have still grown significantly in value. However, Table 6 shows that, regionally, Thailand's exports of agriculture and agro-processed products have actually grown as a proportion of total regional exports, as well as gained significantly in value. This demonstrates the important role that ASEAN countries have played for Thailand's agricultural and agro-processed exporting industries as the country's economy has diversified into manufactured exports. Additionally, the slower drop in the proportion of agro-processed products to the world relative to agricultural products to the world shows the importance of a value-added agricultural industry.

Table 5: The value of different classifications of exports from Thailand to the world and their proportion of total exports

Exports	(1) As a proportion of total exports			(2) Value of exports (US$ million)		
	1990	2010	2018	1990	2010	2018
Total exports	-	-	-	46100	391000	505000
Agriculture	29	13	14	13600	52000	71300
Agro-processed	11	7	8	5240	28100	38900

Source: Authors' calculation based on UN Comtrade Data.

Table 6: The value of different classifications of exports from Thailand to ASEAN and their proportion of total exports to the region

Exports	(3) As a proportion of total exports to the region			(4) Value of exports (US$ million)		
	1990	2010	2018	1990	2010	2018
Total exports	-	-	-	2750	44300	68400
Agriculture	12	12	15	690	5280	10200
Agro-processed	6	7	9	173	3310	5970

Source: Authors' calculation based on UN Comtrade Data.

3.5.2 The concerns of agro-processing

The promise of agro-processing in the region must still be approached with caution. In Table 7 the top two agro-processed intra-regional exports from each country in 2017, and their share in that country's agricultural and agro-processed trade, are shown. For most of the southern African countries there is a single dominant agricultural product line that has a high share in agricultural trade, with the second largest exported product having a significantly lower share. While this lack of diversification is not as strong for countries like South Africa and Malawi, for half of these countries their most exported product to the region is more than double the value of their second most exported product. A lack of diversity in regional trade may not be a problem if countries' exports to the ROW are diversified, but should be monitored in case they indicate a lack of diversification of their overall trade. The reliance on a single product increases the risk of a change impacting the economy and economic growth, and can result in severe shocks to the agro-processing industry, particularly because it is so strongly reliant on agricultural products that can be impacted by external factors – particularly climate.

Table 7: Top agro-processed products at the two-digit level exported within the region by each country in 2017

Country	HS Code	Commodity Title	Proportion of all agricultural trade to the region	Proportion of agro-processed trade to the region
AGO	16	Meat, fish, or crustaceans	15	83
	22	Beverages, spirits, and vinegar	3	14
BWA	23	Food industries, residues, and wastes thereof	7	34
	24	Tobacco and manufactured tobacco substitutes	3	18
LSO	23	Food industries, residues, and wastes thereof	19	66
	19	Preparations of cereals, flour, starch, or milk	6	22
MOZ	24	Tobacco and manufactured tobacco substitutes	28	45
	17	Sugars and sugar confectionery	19	31
MWI	24	Tobacco and manufactured tobacco substitutes	11	33
	23	Food industries, residues, and wastes thereof	10	32
NAM	22	Beverages, spirits, and vinegar	13	62
	16	Meat, fish, or crustaceans	4	20
SWZ	17	Sugars and sugar confectionery	76	79
	20	Preparations of vegetables, fruit, nuts, or other parts of plants	7	7
ZAF	22	Beverages, spirits, and vinegar	13	25
	21	Miscellaneous edible preparations	9	17
ZMB	23	Food industries, residues, and wastes thereof	22	37
	24	Tobacco and manufactured tobacco substitutes	18	29
ZWE	24	Tobacco and manufactured tobacco substitutes	88	95
	17	Sugars and sugar confectionery	4	4

Source: Authors' calculation based on UN Comtrade Data.

In Table 8, the same information is shown to a 6-digit HS code level, and for many countries, this over-specialisation in one product extends down to the 6-digit level, indicating the severity of reliance in many of these southern African countries. More than half of these countries are so heavily reliant on a single agro-processed product that more than 50% of their agro-processed exports to the region are a single 6-digit product line. For some, like Angola, the share of this product in total agricultural trade to the region is fairly low, because of a lack of any strong agro-processing industry, but for countries like Eswatini, Malawi, and Zimbabwe, this product is also an important component of their agricultural exports. This shows that even in countries where agro-processing plays a relatively important role in their agricultural industries, they remain overly reliant on very few product lines, and therefore remain highly vulnerable to shocks in that industry. In order for the agro-processing industry to successfully play the role of promoting economic growth, countries with agriculture as a large proportion of their exports would benefit from diversifying their product lines to ensure risk spreading and resilience in the face of shocks.

Table 8: Top agro-processed products at the six-digit level exported within the region by each country in 2017

Country	HS Code	Commodity Title	Proportion of all agricultural trade to the region	Proportion of agro-processed exports to the region
AGO	160510	Crustacean preparations; crab, prepared or preserved	15	83
	220210	Waters; including mineral and aerated, containing added sugar or other sweetening matter or flavoured	1	4
BWA	230110	Flours, meals and pellets; of meat or meat offal, greaves	2.2	11.2
	230230	Bran, sharps and other residues; of wheat, whether or not in the form of pellets, derived from the sifting, milling or other workings thereof	2.0	10.6
LSO	230210	Bran, sharps and other residues; of maize (corn), whether or not in the form of pellets, derived from the sifting, milling or other workings thereof	15	52
	190531	Food preparations; sweet biscuits, whether or not containing cocoa	6	22
MOZ	240120	Tobacco; partly or wholly stemmed or stripped	37	51
	240110	Tobacco, (not stemmed or stripped)	10	14
MWI	230400	Oil-cake and other solid residues; whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil	8	24
	240120	Tobacco; partly or wholly stemmed or stripped	6	19
NAM	220300	Beer; made from malt	11	52
	160413	Fish preparations; sardines, sardinella and brisling or sprats, prepared or preserved, whole or in pieces (but not minced)	2	11
SWZ	170113	Sugars; cane sugar, raw, in solid form, as specified in Subheading Note 2 to this chapter, not containing added flavouring or colouring matter	39	40
	170114	Sugars; cane sugar, raw, in solid form, other than as specified in Subheading Note 2 to this chapter, not containing added flavouring or colouring matter	16	17
ZAF	210690	Food preparations; n.e.c. in item no. 2106.10	4	7
	170199	Sugars; sucrose, chemically pure, in solid form, not containing added flavouring or colouring matter	3	5
ZMB	230400	Oil-cake and other solid residues; whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil	16	26
	240120	Tobacco; partly or wholly stemmed or stripped	11	19
ZWE	2401	Tobacco, unmanufactured; tobacco refuse	30	91
	1701	Cane or beet sugar and chemically pure sucrose, in solid form	1	4

Notes: Zimbabwe only provides data to the 4-digit HS code level, but this still allows valuable insights into its reliance on tobacco.

Source: Authors' calculation based on UN Comtrade Data.

This dependence on a few products might need to be overcome in order to develop an agricultural industry that can play a developmental role in the economy and resist shocks – particularly for countries that are reliant on their agricultural exports. For small countries industrialisation and processing investments may mean that specialisation is beneficial. Overall growth is certainly the primary aim, meaning that each country will need to decide on an approach accordingly[6] to ensure that their economy is protected, but also given the opportunity to grow and develop higher value-added industries.

3.5.3 Power and governance under a GVC framework and its implications for upgrading suppliers

The specific form of governance found within an agro-processing regional value chain will likely vary depending on specific firm relationships, however, they are likely to fall within either the 'modular or 'captive' value chains (Gereffi, Humphrey, and Sturgeon, 2005). Modular value chains would be likely be more present for supermarkets such as shoprite, that adhere to specific quality and packaging standards and therefore require suppliers to provide products that meet these specifications. In this case, however, suppliers will likely produce in such a way that allows them to produce for a variety of players and therefore take full responsibility for competencies regarding their production processes and ensure that their equipment would allow them to supply multiple supermarkets. On the other hand, captive value chains likely better describe supplier relationships held by supermarkets like Woolworths, which hold their suppliers to a higher standard and are known to require exclusive rights to a product being produced. This means that suppliers face significant switching costs and face substantial monitoring and control from lead firms like Woolworths ().

The types of upgrading that may take place under these governance systems will also vary. Overall, supermarket engagement with suppliers could result in product upgrading, process upgrading, or functional upgrading (Gereffi, 2005). If supermarkets choose to offer investment, despite the market failures, modular value chains are likely to experience product or process upgrading, since these investments would offer benefits to the supermarket involved and would be less time and skill intensive than functional upgrading. Captive value chains may experience functional upgrading. However, firms in a value chain with a supermarket as lead-firm are primarily found to experience product upgrading as supermarkets demand higher quality products (Barrientos et al, 2015). Some process upgrading can take place, particularly when it comes to cold-chain management and other GAP processing standards. This upgrading only takes place when economic downgrading pressures like tight supermarket pricing, rising input and labor costs, and regional supermarket standards are overcome. Barrientos et al (2015) found

[6]See Appendix B for a comparison with Thailand's agricultural diversification

this to be particularly challenging when managing the cost of high interest rate loans required to upgrade facilities to meet supermarket requirements. Overall, upgrading as Gereffi (2005) describes it primarily takes place in the form of product and process upgrading, but only when significant economic challenges are overcome.

These forms of governance across supermarket value chains implies that there may be challenges in upgrading smallholder suppliers into a position where they can sustainably and independently supply the required products. Modular governance implies that there is limited market incentive for supermarkets to actively invest in suppliers, since this investment would also benefit any other competitors that source from the same supplier. However, for suppliers to meet the quality and packaging standards required by supermarkets in modular value chains, significant forms of investment will be required. On the other hand, captive value chains reduce the market failures restricting supermarkets from investing, but significantly raise the investment required for suppliers to reach the very high standards required by supermarkets such as Woolworths. They also introduce the risk that, should Woolworths choose to stop sourcing from a particular supplier, that supplier would face high costs in switching their production processes from Woolworths-specific processes to products that could then be sold to other supermarkets. Under either governance function, suppliers face risk and high investment costs, indicating that for a regional value chain with a supermarket in the lead-firm position to successfully upgrade suppliers, supplier programmes will need to address more than just economic advantage.

The type of upgrading experienced by suppliers within these GVCs is also likely to vary.

3.5.4 The role of value-added in southern Africa's food and beverage exports

The analysis above shows the current role of the agro-processing industry, and although southern Africa has mostly failed to generate momentum in its agricultural and agro-processing industries over the past decade, what promise there is in agro-processing relies on the idea that the industry uses domestic value-added, rather than importing the value added inputs and only engaging in low value-addition domestically. This means that it is useful to briefly unpack the value-addition in agricultural products in southern Africa in order to ensure that investment in this industry would not just result in importing value-added imports. Black, Edwards, Gorven, & Mapulanga (2020: 9-11) include an investigation of the role of value-added in southern Africa's food and beverage exports.

The paper points out three areas of interest in the nature of value-addition in the region's general exports, and in the food and beverage industry[7] specifically. First, aside from South Africa, most

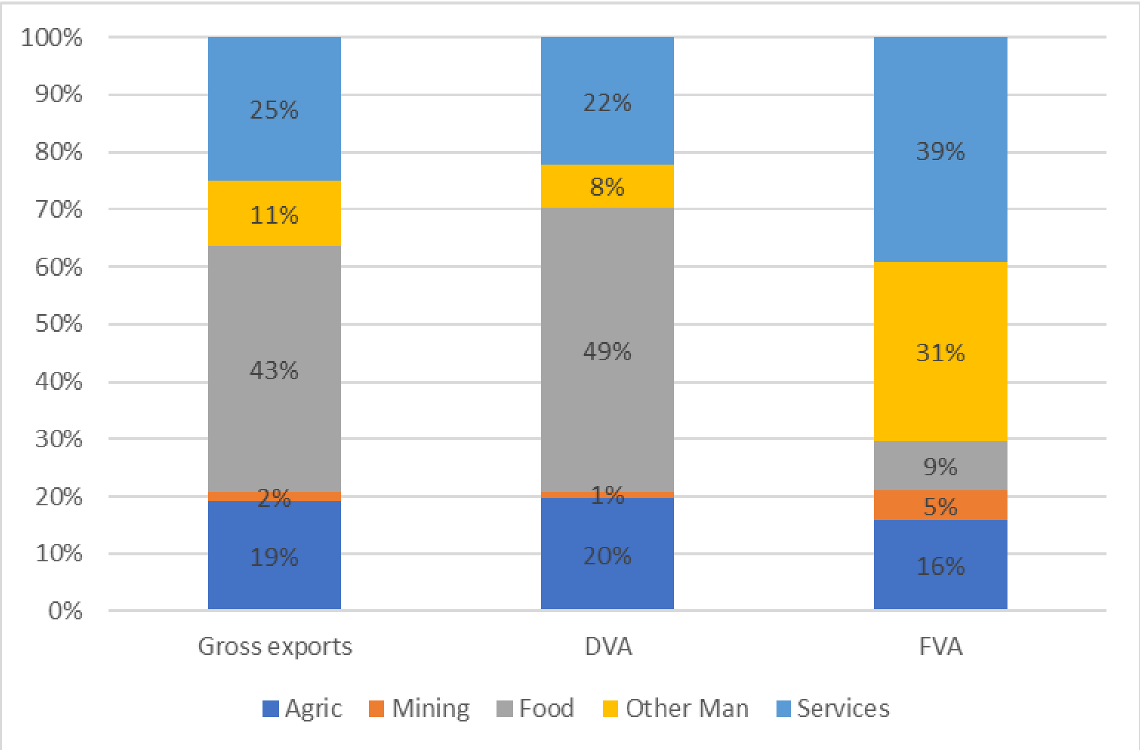
[7] For this section, Black *et al* (2020) use the UNCTAD-Eora Global Value Chain Database, and define 'food and beverages' accordingly. It is not an exact match to the HS-code definition for agricultural products used in this

value-added exports from southern Africa include imported intermediate goods, although the share of foreign value-added per country's exports varies substantially (Black et al., 2020: 10). Second, for many of these countries, SACU is an important supplier of these inputs – indicating that South Africa's dominance in the region applies both to value-added inputs as well as the total exports that are looked at above (Black et al., 2020: 10). Reliance on South Africa is especially concerning considering South Africa's stagnant growth over the past decade indicates that it is likely unable to provide an engine for growth for the region. This finding reinforces what is demonstrated above – that South Africa's large economy holds a significant amount of power in the region, and that ensuring other southern African countries are able to engage with that economy without overly relying on it is essential if the region is to pursue true integration and shared economic development.

paper, but is close enough that the comparison is useful.

Third, and most importantly for the role of agriculture in pursuing this goal, the agriculture and food industries are the largest portion of domestic value-added in food and beverage exports in the region (Black et al., 2020: 11). This can be seen in Figure 3 below. On the other hand, the figure also shows that manufactured products make up the largest share of foreign value-added in food and beverage exports (Black et al., 2020: 11). This indicates that food and beverage exports play a central role in utilising agricultural and agro-processing domestic supply, while most manufactured inputs needed for the industry are imported. The agro-processing food and beverages sector can therefore play an important role in driving growth in agricultural and agro-processed production domestically.

Figure 3: Industry share structure of value-added in food & beverages exports



Source: (Black et al, 2019: 11)

The use of domestic value-added inputs from the agricultural industry in food and beverage exports indicates that where the agro-processing industry presents some opportunity for growth, it is likely to drive domestic agriculture. While southern Africa has not demonstrated a move toward driving the agricultural industry, there are small indications that the industry still holds the potential for growth. This evidence suggests that government, policy, and regional focus on agriculture, and more specifically agro-processing in the food and beverage industry, could provide a window of opportunity for driving economic growth and socio-economic development.

3.6 Conclusion

It is evident from the considerations above that the performance of the region in agricultural exports has been poor. The agricultural sector has faced significant variability within the region, volatility across years, and an overall lack of stability in international trade. This is emphasised when the region is compared to the success that other developing countries, such as Thailand, have had. In 2017, agriculture only made up 20% of the region's total trade, while countries like Thailand used agriculture as a development platform when agriculture was over 29% of total trade

Agricultural trade within the region has a stronger chance of producing development. There is higher trade of agricultural products within the region, and a higher proportion of them are agro-processed, and therefore have the potential to drive upgrading and development. However, South Africa's ongoing trade dominance in agriculture perpetuates an unhealthy regional trade environment, both by avoiding providing smaller economies with access to its larger market, and by driving the countries in the region toward more protectionist policies. Perfectly balanced trade is not necessary, but regional integration and the use of agricultural trade and RVCs must benefit the surrounding countries' upgrading and development in order to achieve effective integration.

Agro-processing does better regionally than it does internationally, and has grown over the past decade, albeit slowly. Furthermore, food and beverages appear to be the greatest users of domestic value-added inputs, rather than relying on imported inputs. This directs the benefit of the industry into other domestic industries. Some countries might benefit from diversification, but overall agro-processing could still present an opportunity for economic development in the region.

This reveals that agro-processing trade within southern Africa has potential to drive economic development, although countries have not capitalised on this opportunity effectively. The region's failure to promote an agricultural industry that can produce development is highlighted by comparisons to international agricultural trade. Agro-processing still presents an opportunity to achieve this development, if support for the industry is phased in, and regional trade is developed equitably and not only in South Africa's favour. This picture of the current agricultural landscape in southern Africa presents the need to investigate in depth examples of how regional agro-processing trade can be equitably grown, which is unpacked in the next section.

4. CASE STUDIES IN REGIONAL SUPPLIER DEVELOPMENT

4.1 Introduction

With the picture of southern Africa's agricultural and agro-processing industries provided by Section 3, this section aims to investigate what kinds of interventions could make use of the potential in growing a regionalised agro-processing industry. Qualitative case studies unpack the role of supplier development and how these programmes could be optimised to pursue stronger developmental outcomes. The supermarket case study fleshes out the findings in Section 3, showing that regional agro-processing trade in the supermarket industry is unbalanced, and that although shifting that balance is possible it must be pursued actively. The Nando's case study demonstrates that there is still scope for improved approaches to development in this industry for all kinds of food retailers. This approach focuses on the role of the private sector, and how government and NGO involvement are needed to incentivise helpful private supplier development programmes. It is an attempt to engage in solutions that might contribute to both developmental supplier upgrading and to bolstering regional agricultural growth through the South African economy.

The RVCs discussed in this section are driven by supermarkets and other food retailers that are South African owned. How they engage in regional agricultural trade and supplier development outside of South Africa allows insight into successes and failures in agricultural development by these retailers, and how this issue should be approached in the future by both firms and policy makers. The question of the potential for value chains to drive regional agricultural and agro-processing growth is dealt with in three parts. First, the role of supermarkets in agricultural trade and the theory regarding their involvement in supplier development builds a picture of both the promise and challenges these industries hold for supplier development. Second, a case study of South African supermarkets' roles in Africa shows the impact of their regional presence for suppliers outside of South Africa. Finally, a case study of the Nando's PERi-Farms Initiative (PFI) shows how the supplier development programme could influence the mechanisms through which food retailers can drive regional agriculture. This presents a qualitative picture of how and why the Nando's project has been successful. Finally, this section concludes with the implications of these findings for driving regional agricultural development.

4.2 Theory and methodology

4.2.1 Supermarkets in southern African retail

For a while now supermarkets have been seen as an opportunity to grow RVCs within southern Africa, and to do so in a way that benefits pre-existing agricultural industries (das Nair and Chisoro, 2015; Black *et al.*, 2019; das Nair and Landani, 2019; Phiri and Ziba, 2019). Large South African supermarkets do appear to have the potential to benefit – or to damage – southern African agricultural and agro-processed industries. However, the region's trade restrictions, and the gap between supermarkets and suppliers, mean that this industry is not a clear-cut opportunity for driving industry growth and supplier development in agriculture. Investigation into supermarket supplier development programmes, as well as other options for RVC engagement, will provide further insight into these complexities.

As is discussed in Chapter 2, a growing middle class in southern Africa has led to increased demand for a greater variety and higher quality of agricultural and agro-processed food products. This has led to the rapid expansion of supermarkets into the rest of the southern African region (Banga and Balchin, 2019). The growth led to hope that supermarkets could provide upskilling and market opportunities for smallholder farmers and agro-processers in southern African countries that would otherwise be unable to upgrade their production (Louw *et al.*, 2010; Black *et al.*, 2019). This potential growth booster for southern Africa is, however, complex and far from certain.

There is certainly a case for South African supermarkets to focus on supplier development in other southern African countries, by building RVC participation and upgrading in these countries' industries. The current level of reliance on South African food retailers creates potential vulnerabilities in the supermarket supply chain which could be protected against through the development of suppliers outside of South Africa (Black *et al.*, 2019). An overreliance on producers in a relatively limited geographical area means that supermarket supply is relatively vulnerable to shocks – environmental, political, economic, and so on – that may occur in a particular area. An example of an ecological shock is the severe drought that South Africa experienced in 2018, impacting horticulture and agriculture in the Western and Eastern Cape provinces, and putting supermarket supplies at risk (World Wildlife Fund South Africa, 2018). Of course, supermarkets could resort to international imports to cover this kind of a supply shock, but developing a diverse supply network inside the region limits these risks.

Even aside from the risk of a shock severely impacting product supply, there is growing pressure to use local producers to supply countries outside of South Africa. Southern African countries are increasingly worried that the import of South African agricultural products into their countries will impact their own local producers. The risks of external firms dislocating local supermarkets are clear in the case of the Walmart/Massmart merger in South Africa. The Competition Appeal Court only allowed the marger under strong conditions of local supplier development[8]. (das Nair, Chisoro and Ziba, 2018). This line of thought means that states are beginning to take steps to encourage supermarkets to invest in local produce suppliers, and to restrict the movement of South African agricultural goods into their countries through NTBs (Namibia Trade Forum, 2016; Black *et al.*, 2019). While SADC aims to produce free trade within southern Africa, these trade barriers could pose a challenge for supermarkets' further expansion into the region. There is therefore an incentive to pursue opportunities in southern African countries that are beginning to encourage local supplier development.

However, despite these potential benefits of suppliers in southern Africa, there are also reasons that South African supermarkets have yet to be significant drivers of supplier development in the region.

Supermarkets require consistent and large quantities of the product (das Nair and Landani, 2019). Furthermore, producers are unable to gradually ramp up their production to meet these requirements because the gap between producing for local or informal food retail markets and producing to the standards of supermarkets is huge. The investment required to do so is a high risk one that cannot be undertaken in stages. Supermarkets are not guaranteed to accept suppliers' products, and so the capital and financial investment that would be necessary to jump between the two tiers of food retail is often unattainable for producers or farmers (das Nair and Chisoro, 2015). A solution that some supermarkets use to solve the problem of quantity is to use aggregators which collect products to sell to the supermarkets (Dillemuth and Hodgson, 2012). This is a new solution, which can face challenges of quality control and consistency, but does allow smallholder producers to access supermarkets, so although quantity of production remains a challenge, quantity may not be the main barrier to supermarkets investing in regional supplier development.

However, supermarkets also demand that products are of a high quality, which remains a challenge to upgrading producers. Particularly, ensuring that products comply with labelling and packaging requirements is expensive, and requires significant investment and capital (Farole, 2016: 59). Many of these packaging and labelling requirements are implemented by governments for trade as a sanitary and phytosanitary control, or to ensure that labels are sufficiently informative and accurate. Even further requirements are imposed by supermarkets with a high

[8] Among other conditions

standard – such as Woolworths – which require very high-quality packaging and processing of the product as a part of their brand (Black *et al.*, 2019). The majority of smallholder farmers are unable to meet these requirements without undergoing expensive and risky investments in their production space. On top of this, for suppliers to expand to a regional market they must meet the varying labelling requirements of multiple countries, which have not been unified or coordinated. Because of this, supermarkets struggle to play a meaningful role in upgrading smallholder producers who are unlikely to meet the required standards (Farole, 2016).

Even if farmers are able to provide a product that meets the requirements of the supermarket, their payment systems often involve a delay of several months between product delivery and payment (Nickanor *et al.*, 2017). This long gap is often financially impossible for small suppliers, and inhibits smaller producers from engaging in the supermarket supply chain. Corruption, trade barriers, and supplying demanding markets all place strain on the relatively unestablished producers outside of South Africa, small or large (Weatherspoon and Reardon, 2003; Das Nair and Landani, 2019). South Africa's large agricultural farms and producers are better able to shoulder all these burdens. This means that supermarkets are highly incentivised to continue relying on large South African agricultural producers.

Finally, many governments have not been able to invest in the infrastructure that allows agriculture and agro-processing to thrive. Agro-processing production require numerous subsidiary services such as reliable access to electricity, specialised equipment, transport, and infrastructure, in order to be successful (Farole, 2016: 29). Where governments have deprioritised the development of infrastructure and services like these in rural areas, it is very challenging for producers to grow enough to sufficiently supply supermarkets. Supermarkets are strongly tied to South African producers that have better access to these services.

Overall, supermarkets may still have the potential to drive some kind of upgrading in southern Africa, and certainly the incentives to do so exist. Being a smallholder farmer is not insurmountable – the use of aggregators to allow scale is an example of this. However, producers outside of South Africa face serious challenges in ensuring their products reach supermarkets – packaging and processing, financing, access to infrastructure, and coordinated trade facilitation. This means that supermarkets must innovate new methods of supplier development to become effective players on the field of RVC growth and economic development in southern Africa.

4.2.2 Supplier development and upgrading through other food retailers

While supermarkets have been relatively well researched, the roles of other food retailers in southern Africa have been less extensively investigated. Investigating whether other types of food retail might offer a more developmental approach to supplier development in southern Africa is therefore important for understanding regional projects' promises and challenges.

Where food retailers are discussed as a potential avenue for engaging in RVCs and supplier development, it is important to be able to discuss all food retailers. Here, 'food retailers' are understood to sell a food product directly to consumers. Supermarkets are a type of food retailer, but other food retailers sell products directly to consumers without supermarkets, and are more involved in the production of the product rather than just the retail. The other food retailers that are discussed in this section are interesting to the topic of RVCs and supplier development because they are able to engage regionally, produce a specific product with agricultural inputs, and are engaged along the supply chain, rather than simply acting as a seller to customers. This kind of product is far more focused than the range of products that supermarkets sell to consumers, which might allow these retailers to engage in supplier development in a different manner to supermarkets, or at least to demonstrate ideas that supermarkets can apply to a particular branch of products. While these characteristics are likely also true for food suppliers and processors like Tiger Brands, this paper is focused on food retailers, and so cannot claim to apply any findings to food suppliers. Further investigation into whether the findings of this study do apply to food suppliers would be beneficial, since they are likely to be very similar and it is probable that the research will apply to both retailers and suppliers. Overall, the potential offered by non-supermarket food retailers is an important avenue to explore, and it is possible that food retailers' lessons about supplier development are also applicable to supermarkets as well as food suppliers.

Non-supermarket food retailers must overcome additional challenges to the ones discussed above in order to be effective in supplier development. Smaller food retailers are likely to have less market influence than supermarkets, smaller budgets for supplier development, and less influence when engaging with important actors for policy creation around agricultural development. The significant size and reach of supermarkets means that they are large enough to be considered active players in governments' plans (Black *et al.*, 2020). Depending on the product that retailers sell, they are also less likely to have a price-setting role in the economy. While this might motivate them to pursue supplier development that promises economic return, it may make the initial investment into supplier development projects – usually a long-run investment – challenging. However, the lack of research on these players in agriculture and agro-processing development in southern Africa makes it challenging to say what to expect from their involvement in supplier development.

The unique set of challenges and strengths in the area of supplier development that other food retailers experience may provide insight into supplier development that has been unclear in supermarkets' regional engagement. This, in turn, may allow new opportunities for policy development and public-private cooperation to emerge.

4.2.3 Data and methodology

In order to investigate these questions of supplier development and upgrading through food retail in Southern Africa, this section utilises case studies in order to achieve an in-depth picture of how different South African firms have engaged in RVCs and conducted supplier development. These case studies are constructed through a combination of available public information on each company and a series of interviews[9]. This combination means that the qualitative value of each company's supplier development is more easily unpacked, and that this addition to the research should be able to understand each company's regional engagement and supplier development programmes, as well as the reasoning behind these decisions.

There are important restrictions to note about this analysis. Since these are case studies, it must be emphasised that this section of research cannot be taken to be representative of entire industries. Instead, it allows for a detailed and in-depth picture of a few companies, and provides some indicators of how certain industries might operate. Regardless of these limitations, this understanding contributes to a clearer picture of regional food retail, and how policy makers and the private sector might engage in RVCs and supplier development in this industry in the future.

[9] Please see Appendix C for ethics approval and consent forms

4.3. Are supermarkets in southern Africa driving agricultural growth?

4.3.1 Supermarkets' role in southern Africa

How supermarkets engage with southern Africa is a key part of understanding whether their supplier development projects might play a role in the driving RVCs and economic development in agriculture and agro-processing. How firms engage outside of South Africa, and how they approach decisions about the southern African market is an important indicator of their role in driving regional trade and integration. The 'supermarketization' of southern Africa has been far from a linear process, and although supermarketization is not guaranteed to have a positive impact on food producers in the region (Nickanor *et al.*, 2017; das Nair, Chisoro and Ziba, 2018; Black *et al.*, 2019), it appears to be a somewhat inevitable outcome for the growing middle class in southern Africa (Das Nair and Chisoro, 2015). It must therefore be taken into account when considering how to promote supplier development in the region.

The initial burst of South African supermarkets expanding into other southern African countries began in the 1990s, but was consolidated during the 2000s and early 2010s. This coincided with rapid economic growth within the subcontinent, and the latter years included a changing investor outlook on African prospects (The Economist, 2011). In 2003, Shoprite had begun to seriously invest in southern African countries outside of South Africa, and Pick n Pay followed close behind (Weatherspoon and Reardon, 2003). Both retailers viewed expansion into southern Africa as a central part of their business strategy. However, this kind of enthusiasm about the prospects of the southern African market has been tempered[10].

Table 10 below shows the total number of main supermarket brands in southern Africa but outside of South Africa, and the growth of each brand over recent years. The past few years reflect a slowdown in Pick n Pay's and Shoprite's expansion into the region, and Woolworths' store count does not demonstrate any significant regional growth at all. Although the economic slowdown in southern Africa is likely temporary, it has changed how South African supermarkets are viewing the wider African market. Pick n Pay currently views the wider African market as an important one to invest in, but also a long-term opportunity, rather than an immediate gap in the market to be filled[11], and subsequently has limited interest in large investment outside of South Africa (Pick n Pay, 2019: 25). This means that while investment and store expansion into the region has mostly continued, it is far more cautious. Store expansion still exists, but is aimed to prioritise setting the firm up for future growth when they feel that the market is ready, rather than pursuing active expansion at the moment (Pick n Pay, 2019: 31). This loss of

[10] Interview; Pick n Pay, 26 November 2019
[11] Ibid

confidence in the region, or at least the perception that supermarkets have reached the current cap for stores outside of South Africa, means that supermarkets' developmental role may be limited by their unwillingness to expand further into the region. Although their presence is still significant, expansion is indicative of investment, which is necessary for a strong developmental impact. The expansion in the region is likely to resume once economic growth resumes, but for now it demonstrates the current approach that supermarkets have toward the region.

Table 9: Major[12] supermarket store numbers and changes outside of South Africa

	Total stores in the rest of Africa			Change in stores in the rest of Africa		
Year	PnP	Shoprite	Woolworths	PnP	Shoprite	Woolworths
2019	148	362	22	4	-57	0
2018	144	419	22	4	34	-1
2017	140	385	23	10	49	2
2016	130	336	21	14	42	0
2015	116	294	21	18	37	1
2014	98	257	20	-6	28	17
2013	104	229	3	10	-	3
2012	94	-	0			

Notes: Shoprite numbers include the Shoprite, Checkers, CheckersHyper, and USave subsidiaries as reported in annual reports, which are the primary food retail brands owned by Shoprite. Before 2013 all Woolworths stores outside of South Africa were franchised. The rapid increase in 2013 and 2014 is reflective of Woolworths purchasing those franchises into their centralised brand

Source: Annual reports of Pick n Pay, Shoprite, and Woolworths

The supermarkets' view of southern Africa as an uncertain market changes how they will impact agricultural development in the region. If supermarkets are unwilling to make big investments outside of South Africa, suppliers will be unlikely to grow sufficiently to supply their local supermarkets, much less engage in agricultural RVCs and benefit from access to South Africa's large market.

4.3.2 Supermarkets' supplier engagement

Although supermarkets currently view southern Africa as more of a long-term market opportunity, their existing investments in the region – and whether or not these are successful – still contribute to some level of development.

As supermarkets do expand into the region – albeit slowly – southern African countries are beginning to push supermarkets to engage more with local suppliers. Namibia's implementation of a formal but voluntary retail charter is an example of sovereign countries in the region

[12] Spar is excluded from this table because of an absence of data on their growth in southern Africa, not includingSouth African stores.

wanting to push South African supermarket companies to invest more in the region. The Namibian charter is not specific to food retail, but specifically aims to increase the number of Namibian products being sold by South African companies (das Nair and Landani, 2019). Companies that have signed the charter have increased their purchasing of local products, and have worked with supplier development requirements of the charter which are discussed later in this chapter. The charter is new, and therefore results are not clear, but initial evidence shows that food retailers in Namibia have increased their purchasing of local products under this government initiative (Das Nair and Landani, 2019). This kind of consistent government support for local sourcing could have a positive impact on the role that South African supermarkets play in the region as they expand. Supermarkets do frequently source large quantities of their fresh produce from local suppliers. Pick n Pay say that as much as 95% of their products are procured from local suppliers (Pick n Pay, 2019). However, this is not as promising as it seems. Local suppliers, in this case, mostly indicates large food distributor brands like Tiger Brands and Pioneer Foods, which sell food products exported from South Africa[13]. Supermarkets are certainly not powerless in this arrangement – they have sufficient market power to push for true local produce – but it appears that at the moment their role in promoting local sourcing of fresh produce outside of South Africa is limited. Government involvement is therefore necessary to move supermarkets' purchasing strategies to be focused on sourcing truly local products.

When discussing government-mandated supplier development programmes, the Walmart/Massmart case in South Africa provides an interesting and important example. Their supplier development initiative – mentioned above – was unable to effectively upskill small-scale subsistence farmers. Even with a commitment of R240 million toward supplier development, the Walmart programme has been relatively limited in its ability to create long-term suppliers of fresh produce. (Das Nair, 2018: 346). The project has successfully enabled some agro-processors to upgrade their production capacity by providing a grant to invest in production plants, as well as helping agro-processors to secure commercial loans that would otherwise be challenging to access for small producers. Supplier development by large supermarkets is therefore possible – even for firms that are not local. However, the programme in this case works less well for smallholder farmers of fresh produce, due to the challenges of upscaling these farmers into commercial producers that can engage in supermarket sales in a relatively short space of time (Das Nair, 2018). Therefore, it is possible that different firms are suited to different styles of supplier development that align better with their businesses.

[13] Interview; Pick n Pay, 26 November 2019

There are examples of suppliers that have benefited from state-mandated local sourcing from supermarkets, as well as suppliers that did not succeed. Zambeef's partnership with Shoprite in 1995 allowed the butchery to grow from 60 to 5000 employees, become listed on on the LSE, and contribute to the development of cold chain logistics in Zambia. The Namibian retail charter – mentioned above – has resulted in two large supermarket chains increasing their local sourcing of milled and animal products (Das Nair and Landani, 2019), resulting in an upgrading of local milling capabilities and higher quality poultry supply. However, there are also clear examples of state mandates resulting in less favourable outcomes. The Massmart case mentioned above details some of the challenges facing the engagement of smallholder farmers and producers (Das Nair, 2018), and in many cases what we see is supermarkets sourcing from local wholesale suppliers, but the wholesale suppliers do not necessarily source from within the country. Overall, there are examples of successful supplier development relationships as a result of government mandates, but many have not driven successful local economic growth and require more careful thinking in order to direct successful local supplier development.

While this move toward countries encouraging local suppliers within their borders is a largely positive one, it does not promote benefit from the large South African market through export of agricultural products to South Africa. More work is necessary to correct the trade imbalance discussed in Section 2 and pursue the kind of supplier development that promotes developmental regionalism.

Currently, firms like Pick n Pay use wholesalers to purchase their goods, and do not directly engage with the trade portion, although they are clearly affected by it. Part of the reason for this are the serious challenges of moving fresh goods. Challenging infrastructure in the form of poor roads is still an issue (Vilakazi, 2018), although this has improved significantly in recent years. Pick n Pay views the primary challenge to its direct involvement in regional trade as the border crossing itself[14]. Inefficiencies at the border are expensive and risky when foods rely on cold-chain transportation. These inefficiencies can come in the form of double border posts – one to leave South Africa and another to enter the next country, or vice-versa – which make border crossings slow[15]. Corrupt practices can also mean a truck must sit at a border crossing for days rather than hours before it is allowed through (Black *et al.*, 2020). There are cases of trucks taking up to a week to move from Johannesburg to Lusaka, where the actual distance of the trip should take less than a day[16]. A more detailed example of NTBs stunting the development of agro-

[14] Interview, Pick n Pay, 26 November 2019
[15] Ibid
[16] Ibid

processing industries is detailed in Box 2 below. This kind of severe restriction at the border discourages supermarkets from directly moving their suppliers' goods between countries.

Box 2: The Zambian sugar industry's trade challenges

Barriers to agricultural and agro-processing trade in southern Africa often come in the form of government regulations that play the role of NTBs. These barriers prevent many of these neighbouring countries from competing with South African products. The Zambian sugar and confectionary industry faces inflated prices by implementing vitamin-A fortification requirements that have effectively prevented any imports of sugar from outside the country (das Nair and Nkhonjera, 2017). While this has enabled a sugar industry within Zambia to develop, the monopoly that has developed under this legislation through Zambia Sugar Plc has been unchallenged by imports and therefore sugar prices in Zambia are significantly higher than in the rest of the region. These high sugar prices have meant that the confectionary industry in Zambia struggles to export or sell its products in supermarkets within Zambia. This demonstrates how clumsy NTBs can protect one domestic industry, while restricting the development of a higher value-added industry with the potential to engage in regional trade. While it should be noted that this high price setting was ruled against by the CCPC in 2017 (Funga, 2017), the damage that trade protection can cause remains.

Supermarkets' ability to play a role in growing agricultural imports into South Africa from the surrounding region is limited by these trade barriers, despite purchasing produce from local suppliers. This means that, at the moment, supermarkets are not playing a strong role in balancing agricultural trade in southern Africa or promoting an agricultural industry in the region that furthers RVCs, integration, or significant economic growth.

4.3.3 Implications for supermarkets' role in supplier development

The role of supermarkets in supplier development remains an important one, but their ability to deliver supplier development that is beneficial to smallholder farmers and pursues regional trade is somewhat limited by their role outside of South Africa.

The nature of the supermarket industry does not easily lend itself to focused investment in smallholder farmers, and therefore for supermarkets to play a role in supplier development, policy is necessary to direct this kind of investment. Although the challenges facing supermarkets are not insurmountable, the role that supermarket supplier development programmes are able to play does not appear to be enough, and ensuring these programmes are pro-poor and uplift the farmers present in southern Africa is not a straightforward task. There are mixed results from government driven supplier development, and it would be useful to investigate different supplier development programmes that could be applied in order to contribute to balancing the region's agricultural troubles as laid out in Section 3.

Furthermore, supermarkets' view of southern Africa, and their current methods of engaging with it, reflect a cautious attitude and a desire to mitigate losses rather than pursue investments that entrench them deeper in the region. Reluctance to invest outside of South Africa means that supermarkets are also likely to avoid investing in local procurement programmes that provide only long-term pay-outs. This limits the amount of significant supplier development they are able to drive, and new interventions will be necessary in order to promote supplier development programmes that do achieve these goals.

Supermarket supplier development programmes would benefit from new strategies and wise policy development in order to drive southern African agricultural RVCs, pursue effective regional integration, and ultimately build an industry that can drive upgrading and economic development in the region.

4.4 Case Study: The Nando's PERi-Farms Initiative and its lessons

How other food retailers engage in southern Africa and its supplier development is far less clear, but the lessons that they could provide may extend to the better researched supermarkets discussed above. The food retailer that this case study focuses on – Nando's – does not present the industry-wide picture that a supermarket analysis does, and must be only taken as a case study. This said, the insights into this case study may provide an example of agricultural supplier development in the private sector that is applicable to other food retailers, as well as supermarkets, and even potentially other food suppliers. These can provide insight into policies that can make supplier development more effective in bolstering developmental regionalism through agricultural RVCs.

4.4.1 Regional ties

Nando's presence in southern Africa, outside of South Africa, stems from three primary points of connection. These differ significantly to the supermarkets' view of southern Africa as a long-run market opportunity.

First, and most similar to the experience of supermarkets in the region, Nando's has outlets in multiple southern African countries, and thus views the region as a market. These include Botswana, Eswatini, Namibia, Zambia, and Zimbabwe. Nando's runs a franchise-structure for its stores, but despite this less engaged form of management, the presence of the Nando's brand in southern Africa demonstrates that the region's consumer market has some importance to the company. However, their presence in southern Africa, compared to South Africa and other areas of the world, is relatively small, and therefore does not play a significant driving force in its engagement with the region and its role in developing the region's agriculture.

There are deeper ties to the southern African region than only a retail market opportunity. Nando's identity as a Portuguese restaurant is based off Mozambican cuisine and the use of the African Birds' Eye (ABE) chilli in their signature PERi-PERi flavours. Of the two founders, one was South African and the other Mozambican (*The Nando's Way*, 2020). This means that while Nando's is a South African company, it has strong historical, cultural, and emotional ties with the broader southern Africa[17]. This kind of interest has been carried through to the current shareholders, some of whom even own an ABE chilli farm in Mozambique[1817]. These ties to countries in the region outside of South Africa mean that Nando's has an interest in engaging in the region due to a sense of social responsibility and personal interest in pursuing development.

[17] Interviews, Nando's, 20 and 24 March 2020
[18] Interviews, Nando's, 20 March 2020

Finally, while supermarkets source some few products from southern African countries while relying on South Africa and imports for the bulk of their stock, Nando's relies on southern Africa to supply ingredients that are key to its brand. Nando's sources its ABE chilli from farms in Mozambique, Zimbabwe, and Malawi[19]. This style of regional engagement will be discussed in depth in the next section on supplier development, but it is sufficient to note that Nando's is reliant on supplies from these countries to create its signature flavours. This reliance is as a result of its supplier development programmes, but grew out of sourcing this product from outside of South Africa. This creates a third link to the southern African region – a supply driven motivation to secure reliable, quality product, and a relationship with the countries as suppliers to a South African business, rather than only as a retail market for South African products.

Nando's ties to the region of southern Africa show multiple levels of investment in the region where not all are reliant on demand-driven consumer markets. Instead, Nando's is driven by a combination of placing importance on development because of genuine interest in improving the region, and supply-side interest in sourcing one of its most important inputs from the region. This differs significantly from supermarket engagement, where supply from southern Africa is not essential enough to their business to play a significant role in driving their interests outside of South Africa.

4.4.2 Nando's supplier development programme

The PERi-Farms Initiative (PFI) – Nando's supplier development programme – has been a successful programme for both the company and for the suppliers with whom it works. This section unpacks how the programme works, key features that make the programme notable – both structural and as a result of other factors – successes and challenges that the project faces, and lessons that it could potentially teach about successful supplier development in southern Africa.

The PERi-Farms Initiative

The case study of Nando's is interesting because of the characteristics of the PFI that contributed to its success. Particularly, its ability to contribute to agro-processing RVCs in southern Africa as well as achieving developmental goals by working with smallholder farmers could provide significant insight into how other supplier development programmes could be more effective in these areas.

The PFI is a supplier development programme run by Nando's in Zimbabwe, Mozambique, and

[19] Interviews, Nando's, 20 and 24 March 2020

Malawi since 2012. The project involves working with local farming cooperatives to empower smallholder farmers to grow the ABE chilli that is so central to the Nando's product. The goal of the project is to secure a consistent, high quality supply of the ABE chilli to the spice producers for Nando's, but it has also been explicitly designed to ensure that the farmers engaging in the project receive upskilling, financial benefit, and other forms of assistance that contribute to an improved standard of living. Its successes are measured first in how it has improved farmers' standards of living – which is tested quantitatively through a third party – and second in how it has benefitted the company (*The Nando's Way*, 2020). The project looks to see whether farmers have been able to invest in their businesses, send their children to school, or improve their living arrangements, among a variety of other means of raising their standards of living. It has been successful enough that Nando's is currently investigating the expansion of the project to other spice products like garlic and cayenne pepper[2019].

The PFI grew slowly and through careful local engagement. Eight years ago, Nando's was not involved in farm-level production of inputs for its products. The initial feasibility study was conducted with funding from international donors, but has since been driven solely by Nando's itself (Black *et al.*, 2020). Through a slow and careful process, Nando's investigated the ABE product and its specific farming requirements, and simultaneously began to engage with farming co-operatives in promising countries that would ensure their on-the-ground engagement was locally relevant and could address the socio-economic challenges faced by individual farmers. There was a gradual development of the project, which grew out of frequent visits to farmers, as it moved from providing only 1.6% of the chillies required in 2012 to now providing about 95% of the required crop[21]. The PFI that exists now continues with this style of engagement, both as a mechanism to continually improve the project, and in order to ensure the aims of the project are being met.

The product's movement from seeds to a final Nando's retail product is monitored the entire way. The PFI works with smallholder farmers through local cooperatives that enable Nando's to implement solutions to local problems. The system in place reflects the necessary components of an additive value-chain, as each individual component is then added to by either farmers, Nando's, or other intermediate players. Nando's makes a quantity of seeds available at cooperatives based on how many chillies they predict they will need. These seeds are given to farmers that are part of the programme on credit. Farmers are also provided access to high quality fertilizer, education around farming techniques, and other opportunities to improve their

[20] Interviews, Nando's, 20 and 24 March 2020
[21] Ibid

crop quality and yield. They then sell the product back to the cooperative at a price that was set when they were given the seeds, less the cost of the seeds that they used. These chillies are dried at the cooperatives – which are responsible for ensuring the chillies collected meet specification – and exported in dried form to South Africa, where Nando's sells them to the spice producers who manufacture the Nando's signature flavour packs. Finally, Nando's buys these flavour packs back from spice producers and uses them to produce a range of food products[22].

This is a brief and simplified overview of the Nando's PFI, but the picture it presents is of an engaged supplier development programme that prioritises developmental outcomes. The features that allow Nando's to do this, and their applicability to projects outside of the PFI, are discussed below.

Key features of the PERi-Farms Initiative

There are several key features to this project that have created its ability to contribute to regional supplier development for smallholder farmers, while simultaneously becoming a financially beneficial and sustainable initiative for Nando's itself. These features are the closed-loop nature of production, the method of providing farmers with financial support and stability, the localised, on-the-ground engagement with farmers' individual contexts, and finally the type of product being produced.

Nando's is the final retailer of the product, but also the owner of the seeds sold to farmers on credit through the cooperatives. This means that this system is a 'closed loop' system, where the initial cost of the seeds is taken on by Nando's itself, indicating Nando's ability to execute 'captive' governance power over the value chain. This allows the company to choose to absorb extra costs that the market would not allow if they were selling the product using the ABE chillies to another company. Nando's buys the chillies from farmers at a set price, which is almost always above market rates by between 20 and 30 percent[23], providing farmers with reliable income and the ability to plan financially. This price setting strategy is possible because Nando's eventually takes on the higher price of the chillies, rather than the farmers or wholesalers. The closed loop allows Nando's to prioritise the socio-economic development and improve standards-of-living for the smallholder farmers engaged in the project, without worrying that other companies in the Nando's value chain will be unwilling to incur the higher cost. Of course, they still sell the product to consumers, who will only pay so much for the product, but as the final retailer, Nando's can choose to sacrifice some of its producer surplus to absorb those

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22 The majority of Nando's retail products are sold directly from Nando's outlets. However, it should be noted thatsome products are sold through supermarkets.
23 Interviews, Nando's, 20 and 24 March 2020.

costs and allow the project to prioritise farmers' welfare to a greater degree. This demonstrates the social responsibility that Nando's prioritises in its supplier development programmes, an aspect of the programme that would need to be promoted with other firms. A key question for expansion of this project is therefore how to achieve the same results in less altruistic firms. This could possibly be achieved through the use of donor aid, or other forms of support that are provided with conditions. Facilitating this kind of social-mindedness could be promoted through funding for feasibility studies that prioritise farmer upgrading, pricing support, or other mechanisms that incentivise companies to promote upgrading within a closed loop system in a way that is economically viable. Nando's sees this closed loop as a centrepiece to their successful supplier development programme because it allows them to pursue the social goals of providing farmers with improved security and livelihoods, and in order to generalise this benefit to other firms, specific focus and support from external actors would likely be necessary.

The second key feature of the PFI is that it aims to improve farmers' financial circumstances. First, by setting an agreed upon price for the ABE chillies at the beginning of the season, Nando's absorbs the risks normally associated with growing ABE chillies for small farmers. ABE prices are usually highly volatile, which means that ABE farmers do not have predictable income each year. By implementing a set price, PFI farmers are able to plan for their year, save confidently for investments, and spend on those investments without worrying about what their income in the future will be. Second, the credit provided to the farmers contributes towards farmers' credit scores. Where poor farmers would normally be unable to access small loans from banks, due to a lack of credit history, the PFI lending scheme means that banks can provide small loans to invest in their farms, or start small businesses. According to interviews conducted regarding the initiative, third-party assessments have found that many farmers have used the reliable source of income and credit score to invest in farming equipment or open spaza stores as an additional source of income[24]. This access to predictable income and lending facilities has significantly contributed to improving the standards of living of farmers and their families and is therefore central to the success to Nando's PFI.

A third feature of the PFI is its focus on ensuring on-the-ground attention from Nando's, as well as localised approaches within each country. In developing this project, Nando's spent a significant amount of time visiting farmer participants, and understanding their individual challenges. A significant amount of effort was, and continues to be, invested into growing relationships with the individual farmers, as well as the cooperatives, and understanding how the PFI could be impactful for those individuals. For some, they needed the ability to send children

[24] Ibid

to school, for others farming equipment and other forms of business investment would fill a significant gap, and for even more they need more rooms in their house or access to running water and sanitation (*The Nando's Way*, 2020). Once these local contexts became better understood, and a relationship was formed with the farmers, Nando's implemented systems that aimed to ensure localised solutions. The farming cooperatives that Nando's works with have played an essential role in ensuring this. Each cooperative is fully engaged with its local context, understands individual laws of the respective countries, and allows the PFI to continually engage with the particular challenges and needs of the farmers that it represents. The challenges farmers face are highly dependent on their countries – for example, Zimbabwean farmers may only use a certain proportion of their land for a cash crop like ABE chillies, while farmers in Malawi and Mozambique do not have this kind of crop restriction[25]. This means that the PFI must take into account local laws and state requirements in order to be successful. In addition to ongoing work with the collectives, the Nando's supplier development team has continued to visit farms, maintain their relationships with farmers, and follow up on whether the project has had a quantifiably positive impact on farmers through third-party analysis. The PFI's successful contribution to farmers' livelihoods has largely been driven by ongoing local, personal engagement that ensures Nando's solutions are actually effective.

Finally, it is key to note that the type of product the PFI produces is central to how the project operates. ABE chillies cannot be farmed effectively with machinery, and must be harvested by hand in order to maintain quality. This makes it a crop well suited to smallholder farming and unthreatened by large-scale mechanised production. The chilli is also dried within each country at the cooperative before it is exported to South Africa. To some extent it is unfortunate that smallholder farmers do not have the ability to dry the chillies themselves and gain the value-added of the processing activity, but the cooperatives do it to the required standard before it is traded, and the value-added contributed by the process remains in the country where the crop was produced. This also means that the relatively slow border crossings discussed with regard to supermarkets' engagement in trade do not adversely affect the product. It can be exported infrequently, and in large quantities, rather than relying on high traffic trade between countries with expensive and risky cold-chain requirements. The ABE chilli itself is therefore an ideal product for this kind of supplier development initiative, and can overcome challenges that other kinds of agricultural products are unable to[26].

These four features of the PERi-Farms Initiative have made it the project it is, and are essential

[25] Ibid.

[26] Ibid.

to consider when examining where the project has succeeded or failed, and what lessons can be taken from this initiative when considering growth and upgrading in southern Africa's agricultural RVCs.

Successes and challenges faced by the PFI

The Nando's PFI has had both successes and challenges. These may indicate to what extent it can be treated as a model of regional supplier development and upgrading, and the growth of RVCs, and how policy creation could be used to achieve similar outcomes.

Due to the intensive on-the-ground engagement by Nando's, and the use of local cooperatives to ensure that farmer's local contexts are well considered by the project, the main success is that the famers have experienced quantifiable improvements in their livelihoods of farmers. Farmers that have been visited each year by a supplier development team have reported growth in their businesses and farms, the ability to invest in machinery or other farm equipment, as well as improvements such as sanitation, running water, access to education for their children, and so on (*The Nando's Way*, 2020). While this project has not upgraded farmers into higher value added agro-processing activities, their value addition in agriculture has been improved through new farming techniques, access to better inputs such as fertilizer and seed, and their ability to engage in other businesses such as small spaza shops has been improved. It should be noted that farmers involved in PFI must all be GAP[27] approved farmers, which does limit which farmers can access this project[28]. This is a necessary restriction in order for Nando's to be able to sell its products globally and would likely apply to other food retailers aiming to engage in this kind of programme. The PFI's primary success has been providing farmers with what they need to improve their standards of living, grow or start businesses, and learn new techniques that improve their existing farming.

On the business side, the PFI has stabilised the quantity of ABE chillies being produced and improved their quality. Before the PFI, Nando's had to rely on farmers to decide that ABE chillies would be the most beneficial cash crop to produce that year, and the supply of chillies would fluctuate severely, along with the prices. Nando's is one of the largest single consumers of ABE chillies, and relies on them for its products, so implementing a closed-loop farming system where they dictated the quantity of crop produced has allowed them to have predictable prices. These are above market prices, in the interests of achieving the primary goal of farmers'

[27] Good Agricultural Practices is a certification that shows producers comply with local food safety legislation, as well as following farming, packaging, handling, and storage processes that minimise risks of microbial food safety hazards

[28] Interviews, Nando's, 20 and 24 March 2020

development, but the certainty provides benefit to the firm. It also allows for predictable quantities of chillies each year. Furthermore, by providing fertilizers that are free of unwanted chemicals, as well as teaching farmers improved farming techniques, the quality of chillies that Nando's receives through the project has improved significantly. This has resulted in the PF being backed by business logic as well as socio-economic development for the farmers, and has helped to justify the costs associated with it, and ensure the project retains longevity.

The PFI has not been easily won, however, with the raised chilli prices having created complications that require careful navigation. The benefit given to the farmers when Nando's pays a higher-than-market price for the ABE chillies is not unnoticed by other players in the supply chain, and it has been a challenge to navigate relationships with producers further along the supply chain. In particular, the spice pack producers have protested at paying higher prices to buy the dried chillies from Nando's, and there have been calls for Nando's to include some of these higher value-added producers in a similar style of project[29]. Additionally, because Nando's is one of the largest purchasers of ABE chillies, by raising the price of the product for the farmers involved in the PFI, they have affected the market price of ABE chillies. This means that farmers outside of the PFI that are producing ABE chillies are at a disadvantage, and might be negatively affected[30]. Implementing a system of artificially raised ABE chilli prices has created real improvement in farmers' lives when they are involved in the project, but has created challenges to maintaining the system with other firms in the supply chain, and may have accidentally disadvantaged other ABE producers in the region. This indicates that the captive power Nando's holds over the current ABE value chain may only expand to benefit other ABE producers with the support of other institutional and constitutional forms of power. This is only really a concern for firms that are large enough to have an impact on market prices, although similarly firms of this size will have an easier time achieving a closed loop system with higher prices.

A further challenge is the time and effort required to build the trust and cooperation required for this kind of project. It took years to earn the trust of smallholder farmers in southern Africa who have frequently been included in NGO or government projects for a year or two, and then abandoned by them. This meant that it also took a long time to ensure that farmers trusted the PFI, and where trust was lacking, farmers would attempt to work around the system, selling chillies on rather than selling them back to Nando's[31]. Now that the project has been running for

[29] Interviews, Nando's, 20 and 24 March 2020

[30] Ibid.

[31] Ibid.

a while, farmers trust the initiative, but ensuring farmer buy-in and smoothing the development of the project was a long and challenging road. It also took a while to ensure that border crossings could be smooth. Projects like this require a serious investment of time and resources, genuine engagement, and trust-building before they are able to function smoothly and benefit both the retailer and the producers.

The Nando's PERi-Farms Initiative has, overall, been a successful and promising supplier development programme in its ability to reach smallholder farmers and achieve developmental outcomes, as well as business sustainability. After eight years of the programme, Nando's is investigating the expansion of the project to other products like garlic and cayenne pepper[32]. However, even after the success of the project for many years, this expansion is cautious, and is only being considered for inputs similar to ABE chillies. The successes of this project indicate that it has lessons available to be learned for other supplier development programmes, and potential implications for the agricultural supplier development field. However, any application of this project must be done in the context of the challenges it has faced, and the reasons that it was able to be successful.

4.4.3 Lessons from the PFI

The PERi Farm Initiative, although not a perfect example of supplier development programmes, has successfully contributed toward smallholder farmers' development and the growth of RVCs in agriculture. It therefore presents some lessons for consideration when applying this project to other supplier development initiatives. These lessons are the importance of control along the value-chain, patient, on-the-ground, local engagement with farmers, and the successful mixing of measurable social responsibility goals and business improvement.

Much of what the PFI does is specifically aimed at social responsibility driven outcomes. The closed product loop discussed above enables the firm to pay the farmers above-market costs for the chillies they produce. Of course, closed loops can also be used by lead firms to drive down prices and exploit farmers, so when aiming to implement lessons from the PFI, it is essential to have incentivisation to avoid this outcome. The closed product loop retains the business relationship of purchasing product from farmers, ensuring that both the company and the farmers benefit from the transaction, and that the project can pursue developmental outcomes without the cost of the product pricing the farmers out of the value-chain. It also ensures that benefit is still linked to the product provided, and avoids resorting to financial 'handouts' to farmers. The provision of credit, financial stability, and training within this system ensures that

[32] Ibid.

farmers are able to pursue economic upgrading and provides them with financial security. In addition, the local engagement that the project is modelled on has allowed Nando's to create a programme that actively addresses local contexts, implement solutions that are effective. Without careful and genuine engagement with individual farmers, the PFI could never have known how much of an increase in income could provide farmers with measurable improvements in their standards of living, or what those improvements needed to be. Furthermore, the use of the cooperatives themselves has allowed Nando's to ensure that the farmers in the project have continuous access to resources, information, and assistance. The time, energy, and ongoing commitment of the PFI to local engagement, closed product loops, financial support, and so on, demonstrates how central social responsibility is to this supplier development programme.

On the other hand, the balance that the PFI has found between pursuing developmental goals and financial goals has provided the project with longevity and consistent support. Nando's explicitly states that the goal of the PFI is to pursue developmental outcomes in southern Africa, and that the whole Nando's company – up to shareholder level – is invested in that as a worthwhile goal[3332]. However, for projects like this to be truly sustainable they must also be at least financially sustainable, but preferably even beneficial, for a food retailer. The stability in supply, quality, and cost predictability that is created by the PFI enables Nando's to absorb the financial costs of the developmental goals of the programme. This provides sufficient incentive for the company to continue the project, and to begin investigating the expansion of the project where possible. This kind of sustainability is challenging for supplier development taking place outside of the private sector, and projects often face funding challenges that leave farmers, once reliant on a programme, more vulnerable than before[3433]. The PFI's benefit to the Nando's business allows the project to provide security and improvement for the farmers involved, as well as providing benefit for the food retailer itself.

The successes of the Nando's PFI are based in a programme balanced by social responsibility and business interests. These are pursued through local engagement, a closed product loop, and achieving supply security of a central input to the product. However, most businesses do not pursue social responsibility as a primary aim, and therefore in order for this kind of programme to be effectively extrapolated to other companies in the region, there must be different kinds of incentive structures to drive the same behaviours. The PFI's initial feasibility study was externally funded, and similar support will be necessary to scale a project like this to other firms (Black *et al.*, 2020). The role that external funding in the feasibility study phase for the PFI may indicate a

[33] Ibid.

[34] Ibid.

mechanism through which other companies can be incentivised to investigate new supplier development opportunities, and with the correct policies attached to that funding, it might be possible to replicate the societal outcomes of the project.

The PFI's success, as is argued for above, also highlights some of the shortcomings of the GVC framework in holistically assessing upgrading scenarios. One of the primary reasons for the PFI's success is its departure from typical, market-led benefits for the lead-firm, and the resultant social upliftment experienced by suppliers that participate in the PFI. The GVC governance framework considers power with a coercive lens (Dallas, Ponte, and Sturgeon, 2019) that does not consider lead-firms that actively seek to achieve social upgrading and developmental outcomes for suppliers. Under the PFI a power structure closer to Dallas et al's (2019) 'Agenda setting" power, which allows firms to remove challenging issues from the solution-space while decision-making. This kind of power is likely to be key when replicating exercises like the PFI, since the lead-firm (or intervention from the state) will likely need to remove options from the solution space that damage developmental economic growth.

The PFI's success is driven by priorities outside of pure economic profit. In order for supplier development projects outside of the PFI to begin to replicate the success demonstrated above, multiple avenues of power as identified by Dallas et al (2019) will need to be in place. Bargaining power is expected within GVCs, but institutional and constitutional power will both be key in driving firms toward socially impactful and developmentally driven supplier development programmes.

Clearly, the PFI has been successful, and has provided significant insight into what a successful supplier development programme can look like. Its ability to be economically sustainable, as well as contribute to the development of agricultural and agro-processing suppliers that are linked into RVCs through South African lead firms, shows that this kind of effective supplier development is possible in southern Africa. However, governments' and donor agencies' involvement is essential for the expansion of this project. Feasibility study funding, and other kinds of support, contingent on projects having a social development outcome, would be a good step in incentivising food retailers to invest in supplier development programmes that are both economically and socially beneficial. Multi-stakeholder engagement like this is essential to drive these projects in a broader scope. Section 5 further interrogates what kinds of intervention could be effective.

4.5 Conclusion

Supermarkets in southern Africa have so far only been able to play a limited role in supplier development that drives changes the agricultural and agro-processing industries need in order to contribute toward economic growth and developmental regional integration. While the role of supermarkets remains an important one, there is scope for other food retailers to demonstrate supplier development methods that could more effectively develop RVCs and pursue pro-poor socio-economic outcomes. The Nando's PFI is an example of such an initiative, although there are still challenges that must be addressed in order to generalise it to other food retailers and supermarkets.

The role of supermarkets in the southern African region for the past decade has been to grow to accommodate the developing middle class. However, this growth has recently been restricted, as supermarkets have viewed the expansion as something with long-term potential, but short-term risks. Within this stagnation of supermarkets' expansion, there are examples of supplier development initiatives, such as the work Woolworths is doing in Namibia. These are limited, and primarily focus on fresh produce for local markets, rather than supplier development for regional trade and supply to the supermarket's regional branches. Furthermore, the role that supermarkets can successfully play in development of regional trade and smallholder farmers is limited by the nature of supermarket food retail. The high quality of product required for supermarkets – specifically packaging and labelling requirements – means that they naturally tend toward suppliers that are large enough to meet those demands. While smallholder farmers are not the only avenue through which to pursue supplier development, it is important for some programmes to orient themselves toward these producers. Finally, the need for food to travel quickly limits supermarkets to purchasing their products from wholesalers and investing in supplier development that is only intended for supermarkets in the area that the farmers are located. Supermarkets will remain important players in southern Africa, and some of the lessons of the PFI might be applied to their supplier development, but there is only space for their role to grow if policy is created that incentivises programmes that are pro-poor and promote more balanced RVCs.

On the other hand, Nando's PFI has demonstrated that food retailers like Nando's are able to implement supplier development programmes that are both beneficial to the company, and that actively pursue developmental outcomes with smallholder farmers. This initiative's success, due largely to the product specificity, local engagement, and a closed loop system, has allowed the PFI to have numerous positive impacts. It has significantly improved farmers' standards of living, grown the production and drying of ABE chilli crops in southern Africa, and stimulated agriculture by providing farmers with the means to invest in their production, as well as learn new farming techniques and grow their businesses. The initiative is a case study and cannot be copy-pasted to other food retailers. However, it does provide a useful and promising example of the role that companies can play when they are culturally invested in the development of the region and they create programmes that further their own interests as well as actively improving the circumstances of those engaged in the project. This could indicate a new approach to pursuing supplier development and the growth of agricultural RVCs in southern Africa, although the initiative's social responsibility needs to be promoted by effective policy measures.

The Nando's case study shows that there are opportunities for successful supplier development, under the right circumstances. However, the market's failure to reward socially responsible investment in supplier development is a challenge to overcome in order for this kind of project to be scalable. The PFI's model is successful because Nando's holds social responsibility as a goal, independent of the business advantage of the programme. This kind of focus on social responsibility is not likely to be present in most firms. Therefore, it is a gap that must be filled by actors outside of private firms; government and NGOs must find a way to create incentive structures that correct for this market failure. Policy development and multi-lateral engagement is essential to pursue supplier development programmes that promote pro-poor regional integration and agricultural upgrading, and is discussed further in Section 5's policy recommendations.

The data analysed in previous sections shows that agricultural and agro-processing trade in the region still has the potential to promote economic development in southern Africa that is pro-poor, addresses the imbalance between South Africa and the rest of the region, and thus promotes a more developmental regionalism in southern Africa. Neither supermarkets, nor the PFI, perfectly solve the myriad of challenges facing regional supplier development and the growth of agricultural RVCs. Supermarkets will likely still play an important role for the region, especially if governments follow Namibia's example of creating policies that push South African supermarkets to invest locally. However, for food retailers' programmes to be developmentally successful, incentives need to be put in place to drive pro-poor outcomes. Nando's PFI provides an opportunity to better understand how other food retailers can contribute to addressing this gap in southern Africa's agricultural trade. It demonstrates a supplier development programme that pursues both economic and developmental goals, and promotes pro-poor regional integration that could drive economic upgrading.

5. CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Conclusions

Agro-processing's potential to contribute toward developmental regional integration and economic growth in southern Africa has yet to be realised. The opportunity remains, but requires careful engagement within the southern African region, as well as endeavours from South African firms to drive supplier development outside of their own country.

5.2 Key findings

The region has demonstrated poor growth in both agricultural and agro-processing trade thus far. Although data analysis shows that agro-processing trade is experiencing slight growth, it still faces numerous challenges, including trade barriers and entrenched imbalanced regional trade. Both agriculture and agro-processing need active intervention in order to tap their potential. Agro-processing trade presents an opportunity to pursue upgrading while also aiming for economic development that is broad-based, pro-poor, and links well to pre-existing industries and resources. Furthermore, the comparative strength of regional versus international agro-processed trade indicates that regional trade is more likely to drive growth and development. However, South Africa's ongoing regional dominance of agro-processed trade pushes other countries toward protectionist policies and makes industrialisation through agro-processing challenging for countries with agricultural industries reliant on smallholder farmers. Agriculture has also been a neglected industry, and without sufficient support for agriculture, agro-processing investment is unlikely to be able to have the desired effect. This imbalance of trade in the region, as well as the low growth of the industry and a lack of support for agriculturally driven development, mean that focused intervention is essential if the industry is to play a developmental and pro-poor role in the region.

To better understand how this intervention could work, qualitative studies in this paper show that there are mechanisms through which agriculture and agro-processing can be promoted as developmental industries in southern Africa. South African food retailers could play a role in driving supplier development in the region. The most studied food retailers – supermarkets – have traditionally been regarded as having the most potential to drive supplier development in southern Africa. However, while supermarkets are a large player in agriculture in southern Africa, their relationship with the region is restricted and has yet to demonstrate a large impact on developmental RVC growth and agricultural supplier development. This is partially because their view of the region as a long-run investment prevents serious intercession with suppliers outside of South Africa, and partially because the nature of supermarkets does not lend itself to smallholder supplier development. While they do engage in supplier development in the region, there is scope for policy to help direct their efforts in more productive directions. The Nando's PERi-Farms Initiative case study provides insight into how pro-poor agricultural development can be pursued by private firms. While Nando's structure is not inherently inclined toward this kind of investment, its strong sense of social responsibility led it to pursue these outcomes. The PFI demonstrates the successful development of smallholder farmers, an economically sustainable intervention model, and has clear mechanisms through which these aims were achieved. This model demonstrates that there is promise in supplier development where closed-loop products are possible, financial support is made available to farmers through multiple mechanisms, and local engagement ensures that the project is fitted to the needs of the local farmers. The PFI model's balance between social responsibility and business sustainability has facilitated effective upgrading of suppliers and prioritised socio-economic development. This initiative could function as a model for other food retailers, and potentially supermarkets, to create broader supplier development and effective growth in agriculture, but policy intervention that promotes social responsibility will be necessary to make the project scalable.

5.3 Future research opportunities

The role of South African non-supermarket food retailers in southern Africa is not well addressed by current research. Further research into non-supermarket food retailers would provide a clearer picture of southern Africa's food retail space, and its potential to drive upgrading and regional trade. The PERi-Farms Initiative, and supplier development projects like it, also require further investigation. In order for these findings to be more broadly applied, it will be necessary to investigate similar case studies of supplier development or gather data from multiple similar interventions for comparison. Finally, this paper does not deal with intermediate food suppliers or producers[35] that do not engage in retail activities. It is very possible that supplier development based on the PFI in this space would also be fruitful. Research into this would further broaden the impact of this paper's findings.

[35] Firms like Tiger brands, which engage in the sourcing, production, and intermediate sale of goods, but do not retailproducts directly to consumers.

5.4 Policy recommendations

The findings above show that there is scope for improvement in agricultural trade, but it requires government support in order to promote the developmental regionalism and economic upgrading that could be achieved.

First, the role of social responsibility in the outcomes of the PFI has been paramount, and governments must seriously consider how to engage with private firms to promote socially minded programmes. The funding Nando's received for its initial feasibility study came from an NGO (Black *et al.*, 2020). This allowed the company to invest in developing a programme that was effective – both for farmers' development and for the firm's business goals – and reduced the risks the company faced from initiating that programme. Government or NGO financial support for feasibility studies of supplier development programmes could contribute toward creating initiatives that are beneficial for both farmers and business. This could be an excellent use of donor aid to promote sustainable, private sector outcomes, rather than government programmes that fail to have long-term impacts. The institutional power inherent in state and NGO-driven partnerships may drive the social and developmental aspects of supplier development programmes for RVCs in southern Africa. Policy that enables the initial investments necessary for programmes like this to be successful, and that requires active pursuit of socio- economic outcomes, would be a good step in broadening the PFI project to firms outside of Nando's.

While agro-processing could drive economic upgrading in the region, developmental regionalism is necessary to achieve this. Thus, as private investment in the region pushes toward this goal, governments must also prioritise a regionalism that is equitable, actively pursues trade facilitation, and promotes stability within the region. For example, streamlining of border posts by removing double crossings, would significantly reduce the business risks of regional trade, and allow the development of much stronger agricultural RVCs. It is important that the regionalism governments pursue works toward balancing some of South Africa's trade dominance. Support by governments for firms that aim to trade regionally could promote the use of the large South African consumer market to grow local production. This, instead of trade barriers intended to protect local industry, could promote a move toward more balanced trade without implementing damaging protectionist measures.

The pursuit of developmental regionalism, and the promotion of agricultural RVCs that are pro-poor and equitable, are large tasks that require government, NGO, and private support in order to succeed. Policies that promote socially-minded supplier development programmes, aim to grow trade facilitation within the region, and work toward balanced trade that is not reliant on protectionism, are a good step toward effective regional integration and developmental RVCs that can start a virtuous cycle of value-added economic growth and upgrading in southern Africa.

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Appendix A: Yearly agricultural trade data

Table 10: Agricultural exports from southern Africa to the world (US$ million)

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
AGO	57	51	90	100	100	215	342	295	252
BWA	477	271	250	360	321	283	255	211	242
LSO	167	219	195	187	149	117	-	55	-
MOZ	696	1 480	1 150	1 350	1 420	-	1 040	1 020	1 260
MWI	1 640	2 170	1 790	1 860	2 020	1 740	1 720	1 590	-
NAM	2 920	2 890	2 750	2 730	2 340	2 150	1 900	2 340	2 580
SWI	-	-	-	1 110	981	954	900	936	-
ZAF	17 000	18 600	18 000	19 100	18 500	15 500	14 000	19 700	21 000
ZMB	901	1 350	2 190	2 310	1 470	1 270	-	1 200	1 140
ZIM	1 220	1 740	2 070	2 230	2 190	2 200	2 150	1 980	2 110

Source: Authors' calculation based on UN Comtrade Data.

Table 11: Agricultural exports from southern Africa to the world as a proportion of total exports (%)

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
AGO	0.1	0.0	0.1	0.1	0.1	0.3	0.6	0.4	0.3
BWA	5.1	2.3	2.1	2.4	2.0	2.2	1.7	1.8	1.8
LSO	16.5	14.2	14.3	26.7	9.1	9.7	-	4.1	-
MOZ	15.5	20.5	16.6	16.8	15.0	-	15.5	10.8	12.1
MWI	77.0	76.1	75.5	76.9	75.4	80.6	84.3	89.8	-
NAM	25.0	24.5	25.5	21.5	19.5	23.2	19.7	22.3	17.2
SWI	-	-	-	29.8	26.0	27.3	28.7	26.0	-
ZAF	10.3	8.6	9.1	10.1	10.0	9.6	9.5	11.2	11.2
ZMB	6.3	7.5	11.7	10.9	7.6	9.1	-	7.4	6.3
ZIM	19.1	24.8	26.7	31.8	35.7	40.7	38.0	28.4	26.1

Source: Authors' calculation based on UN Comtrade Data.

Appendix B: Thailand's agricultural diversification

Table 12: Top exports from Thailand to ASEAN countries (US$ million)

HS Codes	**Classification**	2010	2018
17	Sugars and sugar confectionary	1350	1980
22	Beverages and spirits	492	1550
10	Cereals	843	1220
8	Fruits and nuts	117	1180
21	Misc. edible preparations	570	764
19	Preparations of cereals; pastrycooks' products	361	610

Source: Derived from UN Comtrade Data.

Table 13: Top exports from Thailand to the world (US$ million)

HS Codes	**Classification**	2010	2018
16	Preparations of meat, fish, or crustaceans	11800	13000
10	Cereals	10200	10300
8	Fruits and nuts	1030	4350
17	Sugars and sugar confectionary	3400	4090
20	Preparations of vegetables, fruit, or nuts	3420	4060
3	Fish and crustaceans	5590	3710

Source: Derived from UN Comtrade Data.

Appendix C: Ethics approval

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13/03/2020

Ruth Gorven

School of Economics

University of Cape Town

REF: REC 2020/03/007

The state of agricultural trade in southern Africa and the role of agro-processing value chains in promoting successful regional integration in the area

We are pleased to inform you that your ethics application has been approved. Unless otherwise specified this ethical clearance is valid until 31-Mar-2021 .

Your clearance may be renewed upon application.

Please be aware that you need to notify the Ethics Committee immediately should any aspect of your study regarding the engagement with participants as approved in this application, change. This may include aspects such as changes to the research design, questionnaires, or choice of participants.

The ongoing ethical conduct throughout the duration of the study remains the responsibility of the principal investigator.

We wish you well for your research.

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Commerce Research Ethics Chair
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Appendix D: Consent forms

The state of agricultural trade in southern Africa and the role of agro-processing value chains in promoting successful regional integration in the area

Researcher: Ruth Gorven

Academic supervisor: Prof. Anthony Black

Consent to take part in research

The project aims to investigate the role of supermarkets and food retailers in Southern Africa as core members of regional agro-processing value chains. Specifically, supermarkets can play a powerful role in supplier development, and in determining which countries and producers have access to the growing market of supermarket shoppers in Southern Africa. By understanding how supermarkets make decisions about which suppliers to use, how to structure the procurement process, and their interactions with suppliers, this paper will investigate the role of food retailers in regional integration and the potential challenges, benefits, and policy implications of their ongoing importance in the agro-processing value chain.

You will be asked to answer questions on your firm's involvement in supplier development within the southern African region, your experiences in engaging in regional trade and value-chains, and your experience of public-private partnerships and the role of policy in the success or failure of regional trade.

There are no known risks or dangers to you associated with this study. The researchers will not attempt to identify you with the responses to your questionnaire, or to name you or your company as a participant in the study, nor will they facilitate anyone else's doing so.

"I, L Roddy, acknowledge that I am participating in this study of my own free will. I understand that I may refuse to participate or stop participating at any time without penalty. If I wish, I will be given a copy of this consent form."

Signature of research participant

Signature of participant

20 March 2020

Date

Signature of researcher

Signed by candidate

Signature of researcher

20/03/2020

Date

The state of agricultural trade in southern Africa and the role of agro-processing value chains in promoting successful regional integration in the area

Researcher: Ruth Gorven

Academic supervisor: Prof. Anthony Black

Consent to take part in research

The project aims to investigate the role of supermarkets and food retailers in Southern Africa as core members of regional agro-processing value chains. Specifically, supermarkets can play a powerful role in supplier development, and in determining which countries and producers have access to the growing market of supermarket shoppers in Southern Africa. By understanding how supermarkets make decisions about which suppliers to use, how to structure the procurement process, and their interactions with suppliers, this paper will investigate the role of food retailers in regional integration and the potential challenges, benefits, and policy implications of their ongoing importance in the agro-processing value chain.

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There are no known risks or dangers to you associated with this study. The researchers will not attempt to identify you with the responses to your questionnaire, or to name you or your company as a participant in the study, nor will they facilitate anyone else's doing so.

"I, Yvonne Erwee, acknowledge that I am participating in this study of my own free will. I understand that I may refuse to participate or stop participating at any time without penalty. If I wish, I will be given a copy of this consent form."

Signature of research participant

Signature of participant — Date: 23/03/2020

Signature of researcher

Signed by candidate

Signature of researcher — Date: 23/03/2020

The state of agricultural trade in southern Africa and the role of agro-processing value chains in promoting successful regional integration in the area

Researcher: Ruth Gorven

Academic supervisor: Prof. Anthony Black

Consent to take part in research

The project aims to investigate the role of supermarkets and food retailers in Southern Africa as core members of regional agro-processing value chains. Specifically, supermarkets can play a powerful role in supplier development, and in determining which countries and producers have access to the growing market of supermarket shoppers in Southern Africa. By understanding how supermarkets make decisions about which suppliers to use, how to structure the procurement process, and their interactions with suppliers, this paper will investigate the role of food retailers in regional integration and the potential challenges, benefits, and policy implications of their ongoing importance in the agro-processing value chain.

You will be asked to answer questions on your firm's involvement in supplier development within the southern African region, your experiences in engaging in regional trade and value-chains, and your experience of public-private partnerships and the role of policy in the success or failure of regional trade.

There are no known risks or dangers to you associated with this study. The researchers will not attempt to identify you with the responses to your questionnaire, or to name you or your company as a participant in the study, nor will they facilitate anyone else's doing so.

"I, Steffen Bulbring, acknowledge that I am participating in this study of my own free will. I understand that I may refuse to participate or stop participating at any time without penalty. If I wish, I will be given a copy of this consent form."

Signature of research participant

Signature of participant

23/03/20

Date

Signature of researcher

Signed by candidate

Signature of researcher

28/03/2020

Date