9 The road less travelled

Exploring the untapped potential of intra-regional trade in the SADC

Ermie Steenkamp and Lorainne Ferreira

9.1 Introduction

African governments have long recognised the importance of regional integration in driving the continent's development strategy and have widely supported it since gaining political independence (ICTSD, 2016). Despite the widespread support, achieving deeper integration and increased intra-regional trade has proven challenging (see Chapters 1 and 2). This is mainly due to the small, fragmented, and isolated economies in Africa, making a strong case for regional integration to exploit economies of scale, reduce trade barriers, and benefit from efficiency gains.

The primary objective for the formation of Africa's Regional Economic Communities (RECs) was to promote greater unity among African nations. However, most African RECs have not achieved their member states' economic aspirations, with the underperformance of trade integration being one of the main contributing factors (De Melo, 2013). The SADC is no exception, and although the REC has taken significant steps towards regional trade integration by adopting a comprehensive approach to address challenges related to regional production networks, infrastructure, and competitiveness, there remains a substantial gap between the SADC's objectives and what they have achieved (Baker & Deleplancque, 2016; Nare, 2020).

In this chapter, we highlight the significance of intra-regional trade in achieving deeper integration by identifying and examining potential untapped trade opportunities within the region. The information provided aims to promote increased intra-regional trade in the SADC, which serves as a critical first step towards bridging the gap between idealistic integration-related policy objectives and their practical implementation. This step is crucial in ensuring that regional integration policies and strategies are aligned with the actual needs and priorities of the region.

9.2 The role of trade and regional integration in economic development

Regional integration, also known as regional economic integration, is a multidimensional phenomenon, that involves international trade and investment

DOI: 10.4324/9781003379379-12

flows, infrastructure connectivity, movement of people, technology transfer, and knowledge exchange (Bacrot & Valensisi, 2019). This complex phenomenon brings together countries with the aim of fostering deeper cooperation, promoting economic growth, and addressing common challenges through increased collaboration and harmonised regulations.

According to traditional trade theory, countries trade because of their differences, either in terms of technology or relative supplies of factor endowments such as labour, capital, and land (Ehnst & Trautwein, 2012). If there are differences in the relative costs of producing the same goods, all countries, or regions, can benefit from trading with one another. As such, comparative advantages, determined by patterns of specialisation, determine the direction of trade (Ehnst & Trautwein, 2012).

The theory of comparative advantage therefore assumes that least-developed and developing countries, such as African countries, specialise in the production of primary goods, while more developed countries, endowed with technology, specialise in the production of industrialised goods (Mohammed & Magai, 2019). Consequently, least-developed and developing countries are more likely to trade with developed countries than among themselves (Mohammed & Magai, 2019). The general policy prediction, therefore, is that economic welfare increases through the mutual specialisation prompted by the removal of trade barriers (Ciuriak et al., 2014).

Today, however, actual trade is proving to be mostly intra-industry trade and trade between countries that are relatively similar in their supplies of factor endowments and levels of technology, as explained by the 'new trade theory' (Ciuriak et al., 2014). This theory provides two primary reasons why countries trade. First, different factor endowments between countries allow for mutually beneficial trade, which aligns with the more traditional trade theory of comparative advantage. Second, countries can exchange similar but differentiated goods, which can lead to significant economies of scale and network effects, as highlighted in the new trade theory. While the former theory suggests that countries with similar production structures, such as African countries, should have fewer reasons to trade with one another, the latter theory suggests that deeper integration could lead to substantial gains from intra-industry trade – even among countries at comparable levels of development (Fortunato & Valensisi, 2011). The new trade theory, therefore, highlights that deeper integration can lead to significant gains from intra-industry trade, even among countries with comparable levels of development. This supports the idea that regional integration not only provides member countries with preferential trade access but also enhances countries' overall competitiveness and growth prospects. Regional trade integration, therefore, assists smaller, poorer, and remote countries to scale up their supply capacity in their regional production networks, also allowing these countries to access global markets (Deichmann & Gill, 2008).

The World Bank's (2009) 'Reshaping Economic Geography' report further emphasises the importance of geographic transformations for developing

countries. It suggests that regional integration strategies and policies need to take into account member countries' economic geography, particularly their location, size, and openness to trade, to be effective. The report suggests that countries can achieve success by promoting economic-geographical transformations, which include reducing the number of ***divisions*** among countries by thinning borders, lowering transport costs, and developing infrastructure to take advantage of economies of scale and specialised goods; shortening ***distances*** by encouraging labourers and firms to relocate closer to denser areas; and increasing ***densities*** as cities grow. Regional integration is a critical factor in these transformations to improve the production capacity and structural and spatial transformation needed for sustainable economic growth and development.

According to the World Bank (2009), overcoming divisions is crucial for successful regional integration. While density and distance are important factors, division is the most important dimension internationally, as it affects the mobility of inputs and outputs, as well as the strength of agglomeration (density) and migration (distance). Divisions typically arise from thick borders, created by poor infrastructure, and inefficient customs and border procedures, which restrict market access. By reducing divisions, neighbouring countries can start trading similar goods, leading to benefits from specialisation and economies of scale, as stated in the new trade theory. This, in turn, can lead to lower transport costs, increased trade efficiency and competitiveness, and ultimately, economic growth and development (World Bank, 2009).

Regional integration, therefore, reduces the economic distance between leading and lagging countries, benefiting smaller or landlocked countries the most (Alesina & Spolaore, 2003). African countries can therefore seek strength in numbers by thinning their borders and integrating with their neighbours through RECs (Naudé, 2007). This approach is currently in the spotlight in Africa, where countries actively try to reduce divisions by improving infrastructure and reducing trade costs within existing RECs. This will help to ensure a more coherent approach to integration, which will allow producers and consumers across a particular region to be better connected to one another and global markets (World Bank, 2012). While reducing trade costs is essential for deeper integration, policymakers must also focus on improving production capacity and implementing structural and spatial transformation to ensure that greater market access translates into sustainable economic growth and development.

9.3 Regional integration: Models, strategies, and the impact on cooperation and development

According to Oyejide (2000), regional integration implies at least two overarching goals: the promotion of intra-regional trade and the enhancement of industrialisation and economic growth. Achieving the former requires

reducing trade barriers and liberalising trade within the region, while the latter involves nurturing infant industries to enable them to become competitive and export to regional and global markets. By pursuing these goals, regional integration enables countries to focus on issues that are appropriate to their stage of development, as well as encourage greater trade and economic cooperation among member states.

According to Geda and Seid (2015), one of the most important instruments used to advance regional integration is sustained growth in intra-regional trade. This is also applicable to Africa's integration agenda, which prioritises the expansion of intra-regional trade as a means to promote regional growth and development (Oyejide, 2000). Currently, intra-African exports – although much smaller in value terms – are distributed more evenly among food, manufactured goods, non-fuel primary goods, and fuels. This suggests that increased intra-African trade could result in significant benefits from trade diversification, based on the diverse composition of traded goods among African countries (Hartzenberg, 2011).

The prevailing framework for regional integration in Africa has primarily focused on tariff reduction and eliminating regulatory barriers, exemplified by the Abuja Treaty. However, this linear approach has faced substantial criticism for its inadequacy in addressing the unique challenges faced by the African continent (Davies, 1996; UNCTAD, 2013; Vickers, 2017). The main criticism includes that the linear model puts 'the cart before the horse', so to speak, by calling for unrealistic targets and timeframes for integration that often show little regard for existing economic, political, and institutional realities on the ground (Vickers, 2017). Consequently, the experience with linear integration models varies among African RECs, with implementation efforts often hampered by various challenges and constraints, such as institutional capacity, policy misalignment, infrastructure deficiencies, trade barriers, and economic disparities, to name a few (Osakwe, 2015). Despite these obstacles, some RECs have made progress in their efforts to boost Africa's integration, such as the customs unions launched by the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), and the Economic Community of West African States (ECOWAS) (Osakwe, 2015). However, the effectiveness of these efforts has been subject to debate among scholars and policymakers due to the various challenges and constraints they face. The linear integration approach is, therefore, insufficient in addressing the supply-side constraints that African countries face (Hartzenberg, 2011).

Hartzenberg (2011) suggests a *developmental integration approach*, which includes structural transformation, regional infrastructure development, institutional capacity-building, as well as technology and innovation (Hartzenberg, 2011). The author argues that simply removing artificial obstacles to intra-African trade may not be sufficient to increase trade and deepen integration. Given the structural deficiencies and weaknesses in Africa that prohibit deeper integration (ECA, AUC & AfDB, 2010), countries need

to focus on developing their productive capacities to promote intra-regional trade and integration (Babatunde, 2016).

Developmental integration, in contrast to linear integration, recognises that poor infrastructure and undiversified production structures constitute bigger barriers to intra-regional trade than tariff barriers and regulatory constraints (UNCTAD, 2013). Therefore, effective market integration should not be limited to tariff liberalisation but should also address the key challenges associated with economic transformation and regional integration (UNCTAD, 2013). In other words, a broader development framework is necessary to address shortcomings in countries' productive and supply capabilities, which are essential for promoting intra-regional trade and integration into the global economy (ECA, AUC & AfDB, 2010). Subsequently, developmental integration rests on three pillars: market integration, cross-border infrastructure development, and structural transformation (Vickers, 2017).

Facilitating the growth of intra-regional trade is a crucial first step towards achieving deeper integration, sustained growth, and development. As observed by scholars such as Geda and Seid (2015) and Stuart (2020), trade integration often precedes deeper economic integration. As countries within a region engage in more trade with one another, firms tend to operate at higher capacities, leading to increased productivity and efficiency. Furthermore, greater intra-regional trade promotes competition, encourages investment, and allows for economies of scale and structural changes, all of which are essential to achieve progressively deeper integration and sustainable development.

9.4 Prospects for intra-regional trade growth in the SADC

As SADC member states recognise the vast economic potential linked to deeper integration, they have undertaken to develop policies that progressively eliminate obstacles to the free movement of goods, services, capital, and labour (AUC, 2019). As part of their pursuit for deeper integration, the SADC Secretariat has developed a Regional Economic Integration Strategy (REIS) for 2020–2030, which aims to increase the competitiveness of the SADC economies by promoting value-added production and diversification. In addition, the SADC's Industrialisation Strategy and Roadmap (2015–2063) was approved in 2015 and is designed to accelerate economic growth and strengthen comparative advantages in the region (AUC, 2019). These strategies focus on sectoral cooperation and infrastructure development, indicating a developmental approach to integration (see Section 9.3).

Despite being the second-largest economic community in Africa, intra-regional trade accounted for only approximately 19% of the bloc's total trade in 2020 (SADC, 2020). South Africa dominates the market and is the largest intra-regional exporter in the SADC, accounting for about 35% of intra-SADC exports in 2019 (SADC, 2019). However, the region's heavy dependence on international markets for capital and technology-intensive

goods limits the potential for intra-regional trade in these sectors, with minor exceptions of South Africa.

To foster greater intra-regional trade, the SADC needs to develop more regional value chains and diversify its production base. Developing intra-regional trade in sectors with regional substitutes, such as agricultural and manufactured goods, is crucial to promote regional economic growth and development. Furthermore, investing in regional infrastructure, such as transport and communication networks, would lower trade costs, increase market access, and facilitate intra-regional trade.

The SADC certainly has the potential to mobilise a deeper integration agenda; however, a new way of thinking is required when it comes to market integration issues. Intra-regional trade and integration policies tend to be too general and lacking in practical implementation, resulting in a neglect of established protocols. This study aims to address this issue by identifying untapped trade opportunities within the SADC that are currently unexploited. Despite there being a demand for imports and the necessary production capacity to meet this demand within the region, these opportunities are often overlooked in favour of exports from other countries outside the region. By bridging the gap between idealistic policy objectives and practical implementation, this study can serve as a first step to inform setting priorities in regional trade promotion and ultimately towards achieving a more united and integrated SADC.

9.5 Research method

In this study, the research method employed to identify regional trade opportunities within the SADC incorporated selected elements of the Decision Support Model (originally developed by Cuyvers et al., 1995, for government export promotion purposes) and trade competitiveness indicators based on Reis and Farole (2012). It follows Ferreira and Steenkamp (2020a, 2020b) as well as Ferreira et al. (2022) in matching import demand and export supply to identify regional bilateral trade opportunities on an exporter-product-importer level.

To begin, the approach aims to identify sizeable and growing import demand amongst all HS6[1] digit level products (around 6,000 product categories) in the different SADC countries. Thereafter, the level of competition present in each import market is evaluated. Product-and-country combinations (import markets) that exhibit high concentration with one or two large suppliers are eliminated. Secondly, the analysis considers the export supply of the SADC countries on the same HS6 digit level. Specifically, products in which the different SADC countries display a revealed trade advantage in exporting are selected to match the import demand. Finally, the import demand and export supply are matched to pinpoint exporter-product-importer combinations within the SADC with regional trade potential. To assess the extent of these opportunities, actual exports for

each combination are compared to a potential trade value derived from the average market value of suppliers in each import market. Notably, untapped regional export opportunities are identified when actual exports remain at zero despite the large and/or growing import demand, and when the exporter has the capacity to export the respective product. Figure 9.1 illustrates this process flow.

A more technical explanation of each step follows.

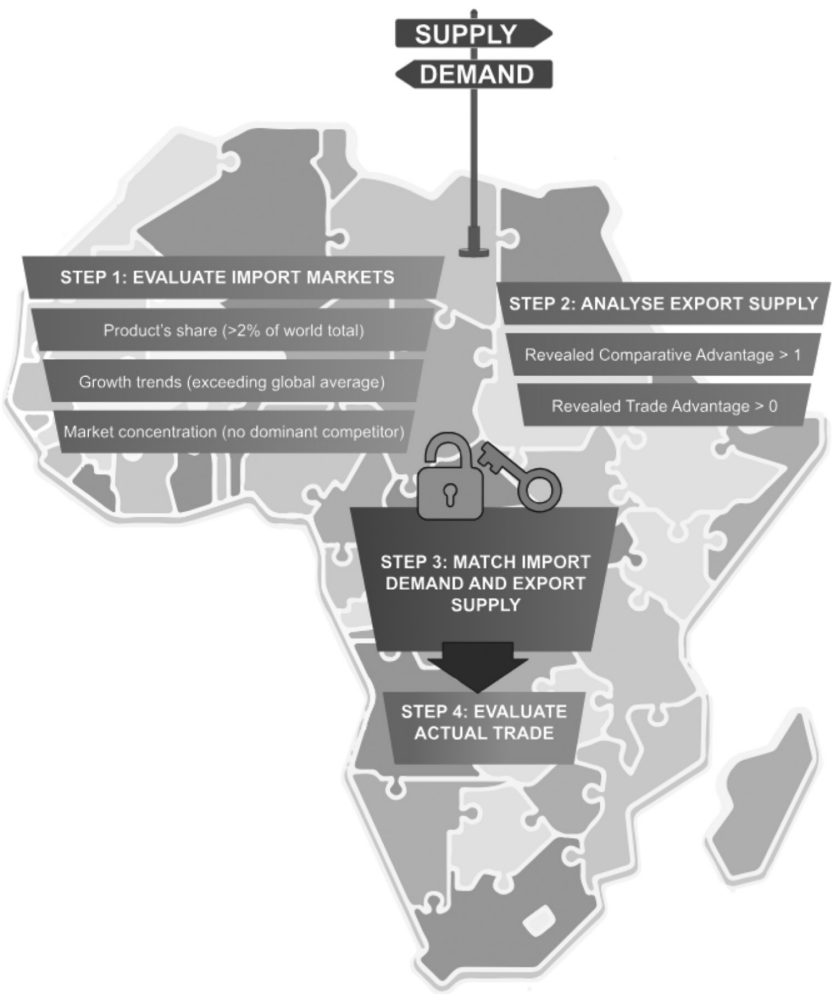

Figure 9.1 Research process flow

Source: Authors' own compilation based on results

Step 1: Evaluating the import demand

This step includes an evaluation of the import size and growth of each importer-and-product combination under investigation. It also assesses the concentration of suppliers in each of these import markets.

Step 1.1: Evaluating import market size and growth

To evaluate the size and growth of import demand, three variables are calculated for each importer-and-product combination. These variables include import market size, short-term import growth, and long-term import growth. Import market size is measured as the importing country's share in world imports of the specific product. The short-term import growth is the most recent annual simple growth in imports. For long-term growth, the compounded annual percentage growth in imports over a five-year period is calculated (Cuyvers et al., 1995: 178; Cuyvers, 2004: 259–260).

To identify out those markets with adequate size and growth, cut-off values are defined following Cuyvers et al. (1995: 179; 1997: 5; 2004: 260). For size, import demand is required to be larger than 2% of world imports of the product. Both the short-term (simple one-year) and long-term (compounded five-year) growth in import demand should be above the world growth rate for the product.

The selection of markets is based on the categorisation illustrated in Table 9.1.

Depending on whether the cut-off criteria are met or not, a value of '1' or '0' is assigned to the corresponding columns in Table 9.1. A product-country combination is considered to have import demand potential if it falls into categories 3, 4, 5, 6, or 7 (Cuyvers, 1997: 6; 2004: 261).

Step 1.2: Import market concentration analysis

Based on Cuyvers et al. (1995: 180), entering a market that has a high degree of concentration can be challenging. A market is deemed to be

Table 9.1 Categorisation of product-country combinations, in terms of, size, and growth of import demand

Category	*Short-term import market growth*	*Long-term import market growth*	*Relative import market size*
0	0	0	0
1	1	0	0
2	0	1	0
3	0	0	1
4	1	1	0
5	1	0	1
6	0	1	1
7	1	1	1

Source: Cuyvers (1997: 7; 2004: 261)

concentrated when a small number of exporting countries hold a significant market share, leading to a higher level of market knowledge and familiarity with local customers. Cuyvers et al. (1995: 180) conducted an analysis that revealed a negative correlation between export performance and market concentration, further supporting their argument. As a result, they concluded that it would be ineffective for government export promotion agencies with limited resources to focus on heavily concentrated markets since the probability of successful exporting is relatively low.

The degree of market concentration is determined using the Herfindahl-Hirshmann-index (HHI) introduced by Hirshmann (1964).

$$HHI_{ij} = \sum \left(\frac{X_{k,ij}}{M_{tot,ij}} \right)^2$$

where:

$X_{k,ij}$: the exports of country k to country i for product category j; and

$M_{tot,ij}$: country i's total imports of product category j.

An HHI value of 1 represents a market solely supplied by one exporting country, and a value closer to 0 indicates a lower concentration where the importing market is served by multiple exporting countries. As such, if the HHI value for a particular market is relatively high (closer to 1), it would be more challenging for an exporting country to penetrate that market, as noted by Cuyvers et al. (1995: 180; 1997: 7; 2004: 261).

To establish a cut-off point for market concentration, Cuyvers et al. (1995: 180) highlighted that market concentration could be a more significant issue in a non-growing market, where competitors have a well-established market share that must be won. Conversely, concentration may be less of a problem in a large, growing market. Consequently, the cut-off point for market concentration was dependent on the category assigned to the various markets in Table 9.1.

The cut-off points are consequently defined as follows (Cuyvers, 1997: 8; 2004: 262):

$$h_k \geq HHI_{ij}$$

with:

$$h_k = 0.4, for\ category\ 3$$

$$h_k = 0.5, for\ categories\ 4, 5, and\ 6$$

$$h_k = 0.6, for\ category\ 7$$

It is therefore clear that a larger degree of concentration is tolerated for larger, growing markets (see Table 9.1).

Step 2: Analysis of the export supply

Production data on a disaggregated level is very difficult to obtain on an HS 6-digit product level for different countries. Therefore another measure/proxy had to be used to measure the supply capacity of the exporter. The Revealed Comparative Advantage (RCA) index is often used to indicate a country's relative export competitiveness for a specific product (Reis & Farole, 2012). It measures the level of specialisation in exporting a certain product by dividing the share of that product in a country's exports by the product's share in world exports (Reis & Farole, 2012). It however overlooks the possibility that the country may be a net importer of the specific product. To address this limitation, the Revealed Trade Advantage (RTA) index is used, as it considers both exports and imports (Vollrath, 1991). The RTA index is calculated by subtracting a country's Revealed Import Advantage (RMA) from its RCA for a particular product.

Following Cuyvers et al. (2012), RCA, RMA, and RTA indices are calculated as follows.

$$RCA_j = \frac{\left(\frac{X_{i,j}}{X_{w,j}}\right)}{\left(\frac{X_{i,tot}}{X_{w,tot}}\right)}$$

Where:

$X_{i,j}$: is country *i*'s exports (i.e. the exports of the country for which priority products for trade negotiations are being identified) of product *j*;

$X_{w,j}$: is the world's exports of product *j*;

$X_{i,tot}$: is country *i*'s aggregate exports; and

$X_{w,tot}$: is the world's aggregate exports.

And

$$RMA_j = \frac{\left(\frac{M_{i,j}}{M_{w,j}}\right)}{\left(\frac{M_{i,tot}}{M_{w,tot}}\right)}$$

Where:

$M_{i,j}$: is the imports of country *i* of product *j*;
$M_{w,j}$: is the world imports of product *j*;
$M_{i,tot}$: are the total imports of country *i*; and
$M_{w,tot}$: is the total imports of the world.
Finally:

$$RTA_j = RCA_j - RMA_j = \frac{\left(\frac{X_{i,j}}{X_{w,j}}\right)}{\left(\frac{X_{i,tot}}{X_{w,tot}}\right)} - \frac{\left(\frac{M_{i,j}}{M_{w,j}}\right)}{\left(\frac{M_{i,tot}}{M_{w,tot}}\right)}$$

The selection cut-offs for these export supply criteria are RTA > 0 and RCA ≥ 1 (Cuyvers et al., 2012). This means that the exporting country is a net exporter of the product (RTA>0), and its RCA in exporting the product is close to one. An RCA index equal to or greater than one means that a country is relatively specialised in exporting the product under consideration (Reis & Farole, 2012).

Step 3: Matching import demand and export supply

The import demand for each importer-and-product combination that adhered to the requirements of being regarded as large and/or growing markets are matched to the exporter-and-product combinations that display an export specialisation. Following Ferreira and Steenkamp (2020a, 2022), the analysis identifies bilateral export opportunities, which represent specific regional trade integration prospects within the SADC. These exporter-product-importer combinations are further examined to analyse the results in detail.

Step 4: Evaluating the utilisation of the bilateral export opportunities identified

Up to this stage, we have considered the total import demand and export supply of each SADC country and HS6-digit product, and then identified bilateral export opportunities by matching them. To examine the extent of utilisation of these opportunities, we calculate a potential export value for each exporter-product-importer combination and compare it with actual exports for that specific combination.

Based on Ferreira and Steenkamp (2020a, 2020b) as well as Ferreira, Steenkamp, and Rossouw (2022), the average market value of all (import) suppliers in each import market served as an estimation of the export potential value. This provides a benchmark to compare to actual exports. It shows whether the exporting country is already supplying more than the average

competitor (utilised opportunities) or less (underutilised opportunities). Actual exports can also be zero, indicating unutilised export potential.

Each of the steps described above is repeated five times to identify regional export opportunities for 2017, 2018, 2019, 2020, and 2021. This is done to account for the impact of the COVID-19 pandemic on global trade, particularly in the year 2020. Exporter-product-importer combinations that were identified either in 2021, 2020, or in two of the three years 2017 to 2019 are included in the results.

The analysis of the results primarily focuses on the un/underutilised bilateral trade opportunities within the SADC region.

To support the analysis of un/underutilised bilateral trade opportunities, import and export data per HS 6-digit product for the 16 SADC countries were collected from the *CEPII BACI* database (CEPII, 2023). The *Centre d'Études Prospectives et d'Informations Internationales* (CEPII) is a French institute for research in international economics. The BACI database relies on the Comtrade dataset of the United Nations Statistical Division. Countries report both their imports and exports to the United Nations, and naturally, two countries report the same trade flow. These reported values rarely match because import values are reported with cost, insurance, and freight on arrival in the importing country, and exports are reported on the vessel in the exporting country. BACI reconciles these trade flows by estimating and removing cost, insurance, and freight cost and removing it from import values. It also takes into consideration the reporting reliability of each country (Gaulier & Zignago, 2010).

9.6 Results

This study aims to bridge the gap between idealistic regional trade policy objectives and practical implementation. It can serve as a first step to inform priorities for regional trade promotion that may ultimately result in deeper regional trade integration in the SADC.

A total of 9,169 regional trade opportunities in the form of exporter-product-importer combinations were identified based on the selection criteria set out in the research method.[2] Of this total, 40% is considered utilised, meaning that the SADC exporter concerned already supplies an equitable portion of the demand in the SADC importing market. Another 16% are utilised to some extent, and 44% are not utilised at all, meaning that no trade is taking place regardless of the sizeable and growing import demand and the export supply capacity (of the product) within the SADC region.

Henceforth, the focus of the results is on the unutilised/untapped bilateral trade opportunities within the SADC region. A total of 4,018 untapped exporter-product-importer combinations are, therefore, the focus of the results from this point onwards.

For a bird's eye view of the results, aggregated country- and sector-level results are first discussed. Table 9.2 ranks the SADC countries based on the aggregated *unrealised potential exports* to other countries within the region.

Table 9.2 Aggregated untapped regional export potential within the SADC

Exporting country	*Sum of untapped export potential value (US$ thousand)*	*Number of untapped export opportunities3 within the SADC*
Mauritius	222,250.76	704
United Republic of Tanzania	94,959.82	412
Swaziland	94,054.60	530
Comoros	78,040.62	121
Malawi	66,177.20	262
Mozambique	52,717.23	188
Zimbabwe	50,208.44	204
Zambia	48,033.82	142
Lesotho	29,226.32	344
Madagascar	29,136.64	621
Seychelles	19,877.84	109
Democratic Republic of the Congo	15,893.35	40
Namibia	12,950.11	133
Angola	12,095.44	26
South Africa	11,980.59	112
Botswana	9,690.31	69

Source: Authors' own compilation based on results

It is evident that the majority of countries within the SADC region possess untapped export potential in 13 or more other SADC countries. This finding challenges the perception that only a select few countries stand to benefit from deeper regional integration. Instead, it highlights the broad scope for mutually beneficial trade opportunities among the SADC nations.

According to the results presented in Table 9.2, Mauritius (as an exporter) has, by far, the highest aggregated untapped export potential in other SADC countries. This potential surpasses that of the second- and third-ranked countries by more than double the value. For example, the top five importing countries that hold the highest untapped import demand for the export products of Mauritius include South Africa (US $85 million), the Democratic Republic of the Congo (US $27.6 million), Angola (US $21.4 million), Mozambique (US $18 million), and Tanzania (US $17.4 million). Export products of Mauritius with the largest export potential include fertilisers (to South Africa, Mozambique, Tanzania, and the DRC), vehicles (e.g., dumpers to South Africa, tractors to Tanzania, and concrete-mixer lorries to Zambia), and machinery and mechanical appliances (e.g., harvester-threshers to South Africa, industrial sugar manufacturing machines to Mozambique, graders and levellers to Tanzania, blow-moulding machines for rubber and plastic to Zambia, bulldozers to Angola, and front-end shovel loaders to Botswana).

It is important to keep in mind that the values presented in Table 9.2 solely represent the untapped export opportunities for each of the SADC countries

Table 9.3 Aggregated untapped regional import demand potential within the SADC

Importing country	*Sum potential value (US$ thousand)*	*Number of untapped opportunities[4] for exporting countries within the SADC*
South Africa	168,728.93	260
Democratic Republic of the Congo	102,217.19	441
Angola	79,402.79	310
United Republic of Tanzania	74,974.32	289
Madagascar	74,906.24	297
Seychelles	66,645.08	595
Malawi	59,535.09	183
Mozambique	55,139.16	339
Zimbabwe	34,821.61	227
Zambia	31,020.34	308
Namibia	29,983.86	47
Mauritius	27,478.38	346
Botswana	22,435.21	63
Lesotho	8,545.59	27
Comoros	6,425.80	229
Swaziland	5,033.50	56

Source: Authors' own compilation based on results

in its role as an exporter. It may be surprising to find that South Africa, for instance, does not rank higher. However, this is due to the fact that South Africa has already tapped into the export opportunities within the region to a much larger extent than other countries. As a result, the total value of untapped opportunities, where no trade is currently taking place, remains comparatively lower for South Africa than for other countries.

Table 9.3 ranks the SADC countries from the perspective of *import demand potential* that remains untapped by exporters within the region.

South Africa holds the largest untapped import demand for exporting countries within the SADC region, followed by the Democratic Republic of the Congo. This implies that this import demand is supplied from countries outside the SADC region. As explained in the research method, the concentration of these suppliers was taken into consideration in the selection process. Therefore, the trade opportunities listed here are not concentrated or dominated by only a few other, large competitors and do have room for suppliers from within the region.

Examples of SADC exporters for whom there are high-valued untapped opportunities within the South African market include frozen sardines from Angola, dumper trucks and sinking and boring machinery from Malawi, fertilisers from Mozambique, cotton yarn from Lesotho, veterinary vaccines from Seychelles, flat-rolled, aluminium coated products of iron and steel from Tanzania, and roasted malt from Zimbabwe.

The Democratic Republic of the Congo holds untapped potential for paper exercise books from Botswana, road rollers from Comoros, wheat flour and maize meal from Lesotho, grinding balls for mills of iron/steel from Malawi, frozen fish from Mozambique, medicine containing penicillin from Mauritius, boneless frozen meat cuts from Namibia, passenger motor cars from South Africa, chewing gum from Swaziland, and cane sugar and cigarettes from Zimbabwe, for example.

Figures 9.2 and 9.3 provide a visual representation of the sectoral distribution of the untapped regional trade opportunities within the SADC, showcasing both the potential value and the number of opportunities available in each sector.

The results aggregated across all SADC countries and products reveal the highest untapped potential value for transport products, chemicals, food, vegetable products, wood products, machinery, electrical products, and textiles and clothing. When considering the number of opportunities, textiles and clothing emerge as a prominent sector within the SADC region (1,194 exporter-product-importer combinations). The high unit value of transport products, including tractors, dumpers, and cement lorries, is evident from the relatively low number of importer-product-exporter combinations within this top-ranked sector in value terms, which amounts to only 83 combinations.

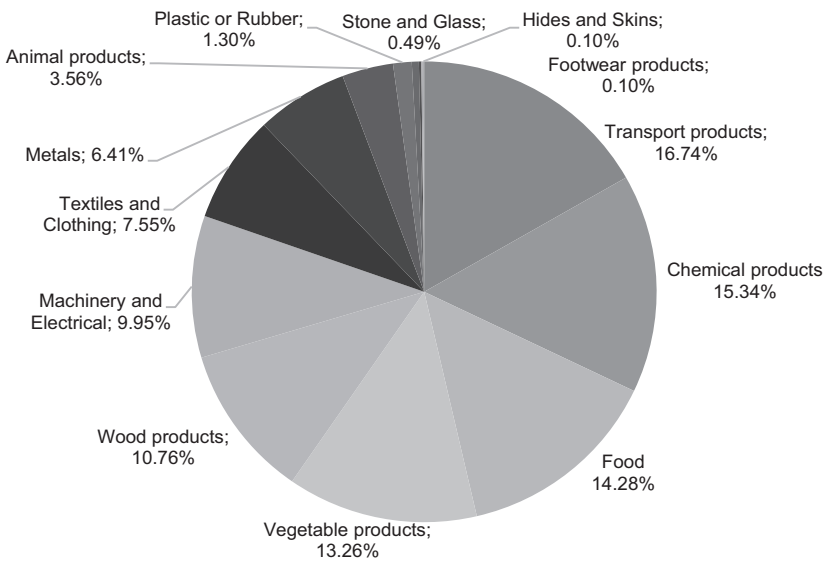

Figure 9.2 Sector distribution of untapped regional trade opportunities in the SADC, based on untapped potential export values

Source: Authors' own compilation based on results

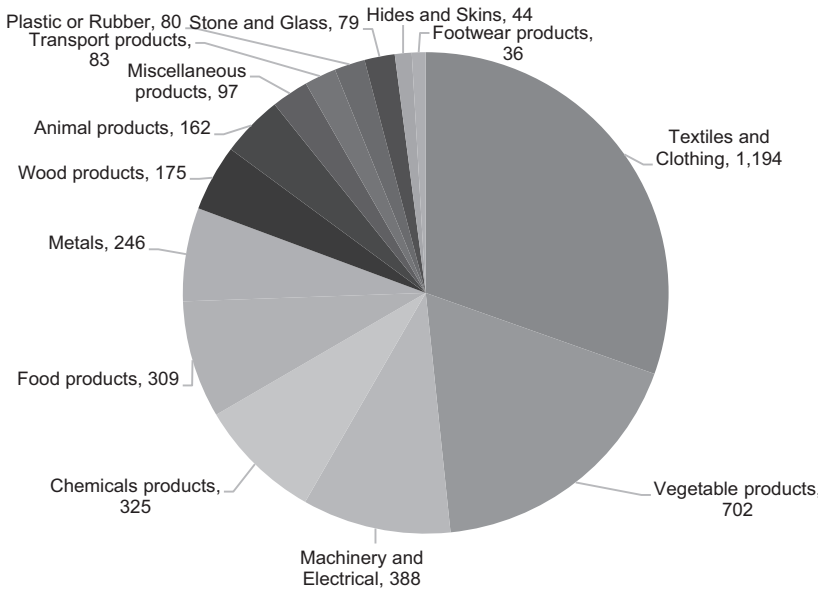

Figure 9.3 Sector distribution of untapped regional trade opportunities in the SADC (based on the number of untapped export opportunities)

Source: Authors' own compilation based on results

Machinery and electrical, as well as food and vegetable products, keep featuring among the sectors with the largest potential, both in terms of value and number of opportunities. Regional trade promotion and integration in food processing can also potentially contribute to the pressing issue of food security in the SADC. Furthermore, the importance of trading in value-added goods for the sake of regional integration via the developmental approach is highlighted in the literature section. Transportation and machinery, for instance, are higher value-added sectors, and the promotion of trade in these products should be prioritised to reap the developmental benefits of regional integration.

To be more specific, Tables 9.4 and 9.5 list the export-product-importer combinations within the transport sector, which is ranked first in terms of potential value, and the textiles and clothing sector, which is ranked first in terms of the number of opportunities.

The detailed results, on an exporter-product-importer level, provide very specific and practical information that can serve as a basis for further investigation and action in realising the regional trade potential within the SADC. While these results may not provide all the answers to the policy implementation challenges in the region, they offer a practical starting point for worthwhile further investigation and action.

Table 9.4 Top 20 regional trade opportunities in the transport sector

Exporter	*Product HS code*	*Product description*	*Importer*	*Potential trade value (US$ thousand)*
Comoros	890392	Motorboats: (other than outboard motorboats), for pleasure or sports	Seychelles	29,706.78
Comoros	890399	Yachts and other vessels: for pleasure or sports, rowing boats and canoes	Seychelles	20,895.95
Mauritius	870410	Vehicles: dumpers, designed for off-highway use, for transport of goods	South Africa	11,535.20
Malawi	870410	Vehicles: dumpers, designed for off-highway use, for transport of goods	South Africa	10,932.91
Mauritius	890200	Fishing vessels, factory ships, and other vessels: for processing or preserving fish	Namibia	7,207.55
Mauritius	890391	Sailboats: with or without auxiliary motor, for pleasure or sports, other than inflatables	Seychelles	6,699.51
Comoros	890190	Vessels: for the transport of both goods and persons (excluding refrigerated vessels, tankers, ferryboats, and vessels primarily designed for the transportation of persons)	South Africa	4,333.34
Mauritius	890190	Vessels: for the transport of both goods and persons (excluding refrigerated vessels, tankers, ferryboats, and vessels primarily designed for the transportation of persons)	South Africa	4,333,.34
Mauritius	870120	Tractors: road, for semi-trailers	Zambia	3,917.62
Malawi	870410	Vehicles: dumpers, designed for off-highway use, for transport of goods	DRC	3,616.33
Swaziland	870410	Vehicles: dumpers, designed for off-highway use, for transport of goods	DRC	3,616.33
Mauritius	870120	Tractors: road, for semi-trailers	Tanzania	3,506.89
Swaziland	871120	Motorcycles (including mopeds) and cycles: fitted with an auxiliary motor, reciprocal	Tanzania	3,433.39
Mauritius	880211	Helicopters: of an unladen weight not exceeding 2000 kg	South Africa	2,956.15
Seychelles	890110	Cruise ships, excursion boats and similar vessels, principally designed for the transportation of persons, ferryboats of all kinds	Tanzania	2,523.94

(*Continued*)

Table 9.4 (Continued)

Exporter	*Product HS code*	*Product description*	*Importer*	*Potential trade value (US$ thousand)*
South Africa	870324	Vehicles: spark-ignition internal combustion reciprocating piston engine	DRC	2,462.54
Comoros	870423	Vehicles: compression-ignition internal combustion piston engine (diesel or semi-diesel)	Namibia	2,115.90
Comoros	870423	Vehicles: compression-ignition internal combustion piston engine (diesel or semi-diesel)	Zimbabwe	1,815.07
Angola	890200	Fishing vessels, factory ships, and other vessels: for processing or preserving fish	Mozambique	1,638.37
Comoros	890200	Fishing vessels, factory ships, and other vessels: for processing or preserving fish	Mozambique	1,638.37
Comoros	870423	Vehicles: compression-ignition internal combustion piston engine (diesel or semi-die	Zambia	1,452.85
Mauritius	870130	Tractors: tracklaying	Botswana	901.94
Mauritius	890391	Sailboats: with or without auxiliary motor, for pleasure or sports, other than inflatables	South Africa	714.59

Source: Authors' own compilation based on results

To illustrate the level of detail that the results hold, Figure 9.4 visualises the untapped export opportunities for men's jackets between SADC countries on a map. Each exporting country is assigned a different colour, and the thickness of the lines in the figure shows the relative size (in value terms) of each opportunity and the destination country identified. These sampled results reveal that intra-regional trade promotion can achieve higher efficiency by targeting the untapped export supply and import demand matches, where no trade is currently taking place.

From a regional development perspective, it is important also to identify country-pairs within the SADC that present mutual opportunities for both importers and exporters. The top 25 are therefore listed in Table 9.6.

To illustrate the depth of the results, it is worth highlighting trade opportunities between the top five country-pairs that exhibit significant untapped potential values exceeding US $3 million. These opportunities encompass a diverse range of products and destinations within the SADC region. Noteworthy examples include the export of fertilisers and dumpers for the transport of goods from Mauritius to South Africa; motorboats and yachts from Comoros to Seychelles, and rope/cables/twine from Seychelles to

Table 9.5 Top 20 regional trade opportunities in the textiles and clothing sector

Exporter	*Product HS code*	*Product description*	*Importer*	*Potential trade value (US$ thousand)*
Swaziland	600490	Fabrics: knitted or crocheted (excluding pile, fabrics, looped pile fabrics, labels, badges & impregnated, coated, covered or laminated knitted or crocheted fabrics)	Lesotho	5,980.97
Tanzania	600622	Fabrics: dyed cotton, knitted or crocheted	Madagascar	2,797.09
Swaziland	600622	Fabrics: dyed cotton, knitted or crocheted	Madagascar	2,182.69
Swaziland	550200	Fibres: artificial filament tow	South Africa	2,129.56
Mauritius	520849	Fabrics, woven: containing 85% or more by weight of cotton, of yarns of different colours	Swaziland	1,920.46
Lesotho	520513	Cotton yarn: (not sewing thread), single, of uncombed fibres, 85% or more by weight	South Africa	1,097.61
Mauritius	560311	Nonwovens: whether or not impregnated, coated, covered, or laminated, of man-made filaments	Angola	1,076.59
South Africa	520849	Fabrics, woven: containing 85% or more by weight of cotton, of yarns of different colours	Madagascar	1,025.83
Malawi	630533	Sacks and bags: of a kind used for the packing of goods, of man-made textile material	South Africa	948.60
Tanzania	630533	Sacks and bags: of a kind used for the packing of goods, of man-made textile material	South Africa	948.60
Swaziland	600622	Fabrics: dyed cotton, knitted or crocheted	Lesotho	807.06
Tanzania	600622	Fabrics: dyed cotton, knitted or crocheted	Lesotho	807.06
Malawi	520512	Cotton yarn: (not sewing thread), single, of uncombed fibres, 85% or more by weight	Mauritius	791.08
Madagascar	630532	Sacks and bags: of a kind used for the packing of goods, of man-made textile material	DRC	783.62
Madagascar	550190	Fibres: synthetic filament tow, of synthetic materials (excluding that of acrylic, modacrylic, polyesters, polypropylene, nylon, or other polyamide filament)	Tanzania	783.03

(*Continued*)

Table 9.5 (Continued)

Exporter	*Product HS code*	*Product description*	*Importer*	*Potential trade value (US$ thousand)*
Lesotho	510111	Wool (not carded or combed): greasy (including fleece-washed wool), shorn	Mauritius	743.91
South Africa	510111	Wool (not carded or combed): greasy (including fleece-washed wool), shorn	Mauritius	743.91
Swaziland	630533	Sacks and bags: of a kind used for the packing of goods, of man-made textile material	Zambia	721.69
Swaziland	521132	Fabrics, woven: containing less than 85% by weight of cotton, in three-thread or four-thread twill, including cross twill dyed	Madagascar	685.65
Tanzania	520512	Cotton yarn: (not sewing thread), single, of uncombed fibres, 85% or more by weight	Mauritius	642.17
Malawi	630533	Sacks and bags: of a kind used for the packing of goods, of man-made textile material	DRC	513.08
Swaziland	630533	Sacks and bags: of a kind used for the packing of goods, of man-made textile material	DRC	513.08
Madagascar	621040	Garments: men's or boys' garments of textile fabrics, rubberised, impregnated, coated, covered or laminated with plastics or other substances (excluding baby's garments or clothing accessories)	Malawi	506.45
Mauritius	600632	Fabrics: knitted or crocheted fabrics, other than those of headings 60.01 to 60.04,	Swaziland	458.92
Madagascar	630790	Textiles: made up articles (including dress patterns)	Namibia	427.26

Comoros; rice cereals from Tanzania to Mozambique, and aluminium wire (>7mm) from Mozambique to Tanzania; fertilisers, wheat flour, and sugar from Mauritius to the Democratic Republic of the Congo; and, finally, frozen sardines and paper/paperboard from Tanzania to South Africa.

It is important to emphasise that these country-pair matches, along with others beyond the top 25 listed in Table 9.6, offer valuable insights for prioritising regional infrastructure development and trade facilitation initiatives within the SADC.

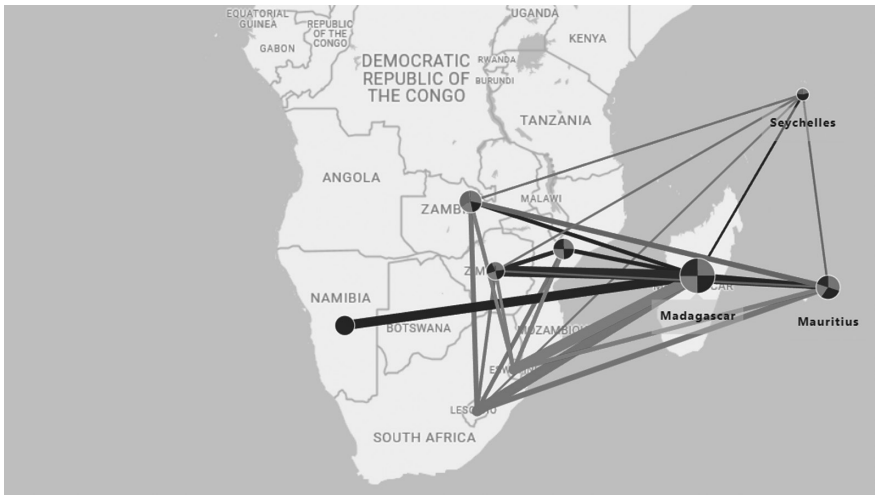

Figure 9.4 Untapped trade opportunities for men's jackets between SADC countries
Source: Authors' own compilation based on results

Figure 9.5 illustrates all untapped bilateral trade opportunities in the SADC (excluding commodities and livestock products, as this study focuses on diversification and value-add in regional trade). The thickness of the lines between two countries represents the sum of the untapped export potential values between each set of trading partners in both directions. Thicker lines indicate higher total untapped trade potential, while thinner lines signify lower total potential.

Intra-regional trade in the SADC remains low and the figure above shows many unrealised trade opportunities in the region that can be explored. By considering mutual opportunities and specific product exchanges, policy-makers and stakeholders gain essential information to guide their decision-making processes and focus their efforts on fostering regional integration and enhancing trade within the SADC.

9.7 Conclusion

Regional trade and integration hold great potential for establishing new networking interactions, expanding intra-regional trade, and accessing new markets. This increased trade has the potential to address export competitiveness constraints, improve infrastructure, and facilitate both regional and global trade. The pooling of economies through regional integration should also create economies of scale. However, historical progress in the SADC in this area has been limited, and significant structural and policy challenges still need to be overcome.

While addressing these challenges will take time, it is crucial to identify trade opportunities to enhance intra-regional trade, which currently

Table 9.6 Top 25 country-pairs in terms of aggregated untapped trade potential within the SADC

Product category (HS2)	*Sum of export potential value (US$ thousand)*	*Number of untapped trade opportunities between SADC countries*
Mauritius -> <- South Africa	86,378.45	86
Comoros -> <-Seychelles	51,025.06	24
United Republic of Tanzania -> <- Mozambique	31,244.85	50
Mauritius -> <- Democratic Republic of the Congo	27,931.48	105
United Republic of Tanzania -> <- South Africa	25,096.93	63
Mauritius -> <- Angola	23,904.05	74
United Republic of Tanzania -> <- Madagascar	23,020.88	87
Malawi -> <- Democratic Republic of the Congo	21,910.05	35
Mauritius -> <- United Republic of Tanzania	21,907.78	122
Malawi -> <- South Africa	19,297.30	18
Mauritius -> <- Mozambique	19,114.51	111
Zimbabwe -> <- Malawi	18,125.75	20
Zimbabwe -> <- Democratic Republic of the Congo	17,137.27	33
Swaziland -> <- United Republic of Tanzania	14,666.38	62
Zambia -> <- Malawi	13,855.53	14
Swaziland -> <- Democratic Republic of the Congo	13,791.90	59
Zambia -> <- Madagascar	13,681.46	93
Swaziland -> Angola	13,587.09	35
Swaziland -> <- Malawi	13,528.34	27
Mauritius -> <- Madagascar	12,571.69	61
Mauritius -> <- Zambia	12,271.30	100
Zimbabwe -> <- Madagascar	10,698.55	65
United Republic of Tanzania -> <- Angola	10,602.20	43
Mozambique -> <- Democratic Republic of the Congo	10,486.48	24
Mauritius -> <- Namibia	10,442.26	27

Source: Authors' own compilation based on results

remains at a low level. Policies related to intra-regional trade and integration in the SADC have often been broad and idealistic, lacking proper implementation of protocols. This study aims to bridge this implementation gap by providing information on untapped opportunities for real intra-African trade.

Specific untapped intra-regional trade opportunities were identified at an importer-product-exporter level within the SADC region. Being untapped means that, regardless of the consistently large and growing import demand for the product that can be matched with competitive export supply within the region, there has been no actual trade over the five years under investigation.

The study identified a total of 4,016 untapped matched opportunities between the 16 SADC countries from 2017 to 2021. Importantly, mutual opportunities were identified for all SADC countries, highlighting that each country has untapped trade potential with multiple countries in the

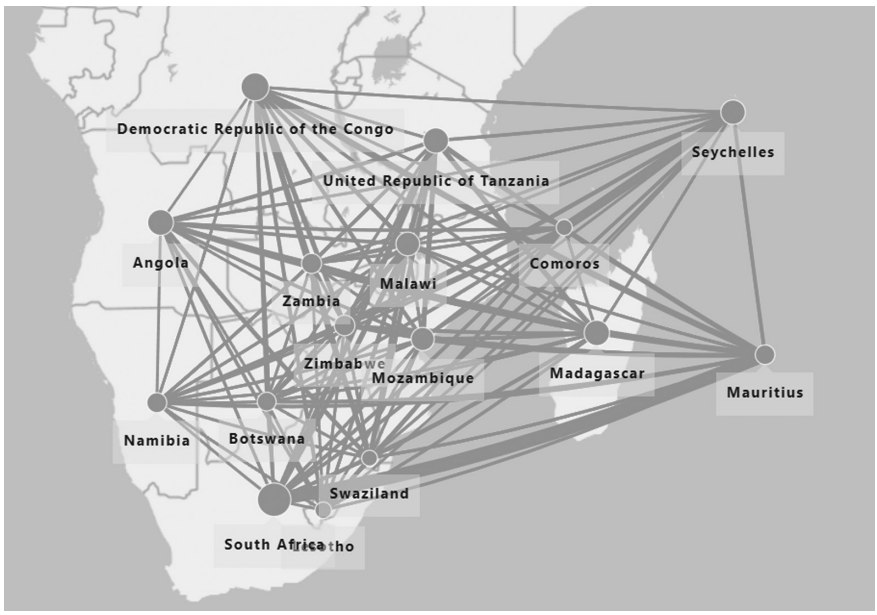

Figure 9.5 Illustration of all untapped, value-add trade opportunities in the SADC
Source: Authors' own compilation based on results

region. Therefore, all SADC countries can benefit from trade integration within the region rather than just a select few. The results also reveal high-value untapped trade opportunities in, *inter alia*, sectors such as transportation and machinery, as well as numerous opportunities in textiles and clothing products. Realising this potential could serve as an initial step towards increased competitiveness and even expanded industrialisation throughout the region.

The country-pair matches in Table 9.6 can inform the prioritisation of regional development strategies. Establishing infrastructure links between countries and targeting hindrances to trade between specific countries, and in prioritised sectors, can go a long way towards a more integrated region to the benefit of all.

Finally, if SADC policymakers can support countries in tapping into the unexplored regional trade potential that is currently being utilised by countries outside the region, it can be a first step toward reaping the benefits of regional trade integration. These benefits include new networking interactions, deeper cooperation, technology transfer, knowledge exchange, reduction of regional disparities, better resource allocation and efficiency, increased competitiveness, a larger market, and economies of scale.

Notes

1 The Harmonised System (HS) is an international nomenclature for the classification of products. It enables countries to categorise traded items uniformly, facilitating customs procedures. All countries employ the same HS codes up until the six-digit level.
2 Livestock and commodities were excluded in line with the developmental approach to regional integration discussed in the literature section. This approach recognises diversification and value-add in trade for the sake of scaling up supply capacity and regional production networks (see Section 9.2).
3 Product-and-importer combinations.
4 Product-and-exporter combinations.

References

Alesina, A. & Spolaore, E. 2003. *The Size of Nations*. Cambridge, MA and London: MIT Press.

AUC (African Union Commission). 2019. 2019 *African Regional Integration Report: Towards an Integrated Prosperous and Peaceful Africa, Addis Ababa (Ethiopia)*.

Babatunde, M.A. 2016. Chapter 13: Tripartite Free Trade Area in Africa: Overcoming the barriers for effectiveness. In A. Adenikinju, J. Afeikhena & O. Ogunkola (Eds.), *The Quest for Development*, pp. 309–328. CPEEL.

Bacrot, C. & Valensisi, G. 2019. Harnessing trade facilitation for regional integration. *UNCTAD Transport and Trade Facilitation Newsletter*, 83 (24 September 2019). Available at: https://unctad.org/news/harnessing-trade-facilitation-regional-integration

Baker, L. & Deleplancque, A. 2016. Achievements, challenges, and constraints of trade integration in SADC. *Journal of African Trade*, 3(1–2):1–20.

CEPII. 2023. CEPII database, viewed 15 January 2023, from http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=37.

Cuyvers, L., De Pelsmacker, P., Rayp, G. & Roozen, I.T.M. 1995. A decision support model for the planning and assessment of export promotion activities by government export promotion institutions: The Belgian case. *International Journal of Research in Marketing*, 12(2):173–186.

Cuyvers, L. 1997. Export opportunities of Thailand: A decision support model approach (CAS discussion paper, no. 9). http://webhost.ua.ac.be/cas/PDF/CAS09.pdf. Date of access: 17 January 2008.

Cuyvers, L. 2004. Identifying export opportunities: The case of Thailand. *International Marketing Review*, 21(3):255–278.

Cuyvers, L., Steenkamp, E. & Viviers, W. 2012. Methodology of the decision support model. In L. Cuyvers & W. Viviers (Eds.), *Export Promotion: A Decision Support Model Approach*, pp. 52–80. Stellenbosch: Sun Media.

Ciuriak, D., Lapham, B., Wolfe, R., Collins-Williams, T. & Curtis, J. 2014. Firms in international trade: Policy implications of the new new trade theory. *Global Policy*, 6(2). https://doi.org/10.1111/1758-5899.12183.

Davies, R. 1996. Promoting regional integration in Southern Africa. *African Security Review*, 5(5):27–38. https://doi.org/10.1080/10246029.1996.9627823.

De Melo, J. 2013. Regional trade agreements in Africa: Success or failure? *International Growth Centre*, 3 December 2013. Available at: https://www.theigc

.org/blog/regional-trade-agreements-in-africa-success-or-failure/ Date of access: 15 April 2023.

Deichmann, U. & Gill, I. 2008. The economic geography of regional integration. *Finance and Development*, 45(4):45–47.

ECA (Economic Commission for Africa), AU (African Union) and AfDB (African Development Bank). 2010. Assessing regional integration in Africa IV. Enhancing intra-African trade. https://repository.uneca.org/handle/10855/15956. Date of access: 18 April 2023.

Ehnts, D. & Trautwein, H. 2012. From new trade theory to new economic geography: A space odyssey. Œ*conomia*, 2(1):35–66.

Ferreira, L. & Steenkamp, E.A. 2020a. Identifying regional trade potential between selected countries in the African tripartite free trade area. *South African Journal of Economic and Management Sciences*, 23(1):a2936. https://doi.org/10.4102/sajems.v23i1.2936.

Ferreira, L. & Steenkamp, E.A. 2020b. Promoting sustainable and inclusive trade by exploring untapped intra-regional trade opportunities in Africa. *Africa Insight*, 49(4):72–87.

Ferreira, L., Steenkamp, E.A. & Rossouw, R. 2022. Targeting untapped intra-regional trade opportunities for trade integration in Africa. *Journal of Economic and Financial Sciences*, 15(1):a779. https://doi.org/10.4102/jef.v15i1.779.

Fortunato, P. & Valensisi, G. 2011. Trade integration and development opportunities in Africa. United Nations Conference on Trade and Development, Geneva, UNCTAD.

Gaulier, B. & Zignago, S0. 2010. BACI: International trade database at the product-level. CEPII Working Paper 2010-23, October, CEPII.

Geda, A. & Seid, E.H. 2015. The potential for internal trade and regional integration in Africa. *Journal of African Trade*, 2(1–2):19–50.

Hartzenberg, T. 2011. Regional integration in Africa. WTO Staff Working Paper No. ERSD-2011-14, World Trade Organisation (WTO), Geneva. http://doi.org/10.30875/fad9df15-en.

Hirschman, A.O. 1964. The paternity of an index. *An American Economic Review*, 54:761–762.

ICTSD. 2016. *African Integration: Facing up to Emerging Challenges*. Geneva: International Centre for Trade and Sustainable Development (ICTSD).

Mohammed, M. & Magai, P.S. 2019. Effects of regional economic integration on regional trade in Africa: The case of regional economic communities. *Business Management Review*, 22(2):119–134.

Nare, B. 2020. Accelerating regional trade integration in Africa through regional value chains: A SADC perspective. Faculty of Commerce, Graduate School of Business (GSB). http://hdl.handle.net/11427/32934.

Naudé, W.A. 2007. Geography and development in Africa: Overview and implications for regional cooperation. WIDER Working Paper Series 2007/03, United Nations, Helsinki.

Oyejide, T.A. 2000. Policies for regional integration in Africa. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/00157658-FR-ERP-62.PDF. Date of access: 15 April 2023.

Osakwe, P.N. 2015. Transformative regionalism, trade and the challenge of poverty reduction in Africa, trade and poverty paper series, no. 1, United Nations conference on trade and development (UNCTAD), Geneva.

Reis, J.G. & Farole, T. 2012. Trade competitiveness diagnostic toolkit. © World Bank. http://hdl.handle.net/10986/2248 or https://doi.org/10.1596/978-0-8213-8937-9.

Southern African Development Community (SADC) 2019. SADC trade, industry, finance and investment. Review. https://www.sadc.int/files/8015/5507/1671/SADC_TIFI_Review_2019.pdf. Date of access: 15 April 2023.

Southern African Development Community (SADC) 2020. SADC trade, industry, finance and investment. Review. https://www.sadc.int/sites/default/files/2022-02/Annual_Report_2020_-_2021.pdf. Date of access: 15 April 2023.

Stuart, J. 2020. Do African RECs increase intra-African trade? Some evidence from Uganda. https://www.tralac.org/blog/article/14784-do-african-recs-increase-intra-african-trade-some-evidence-from-uganda.html. Date of access: 25 July 2020.

United Nations Conference on Trade and Development (UNCTAD) 2013. *Economic Development in Africa Report 2013. Intra-African Trade: Unlocking Private Sector Dynamism*. https://unctad.org/publication/economic-development-africa-report-2013.

Vickers, B. 2017. *A Handbook on Regional Integration in Africa: Towards Agenda 2063*. The Commonwealth, London. Chapter 1: Political Economy of Regional Integration in Africa, pp. 1–39.

Vollrath, T. 1991. A theoretical evaluation of alternative trade intensity measures of revealed comparative advantage. *Weltwirtschaftliches Archiv*, 127(2):265–280. https://doi.org/10.1007/BF02707986.

World Bank. 2009. World development report 2009: Reshaping economic geography. https://openknowledge.worldbank.org/handle/10986/5991. Date of access: 28 April 2023.

World Bank. 2012. Removing barriers to trade in Africa. http://www.worldbank.org/en/region/afr/publication/defragementing-africa-deepening-regional-trade-integration-goods-services. Date of access: 23 March 2023.