

South Africa-Africa trade: Implications for South Africa in intra-Africa trade with the African Continental Free Trade Area in place

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Key words

Trade complementarity, Revealed trade barrier index, Trade intensity.

Abstract

South Africa's trade was examined for the period 2001-2021 to give insights into current trade with Africa as this has implications for its trade in the African Continental Free Trade Area. The structure of goods traded, trade complementarity, ease of market access, trade intensity with regional groups, and its trade integration dimension with Africa were examined. Results show that (i) Africa is an important market for South Africa's manufactured products with greater skill and technology content and there is ease of market access for these products into African markets; (ii) its trade with Africa is highly complementary; and (iii) it has strong trade linkages with Africa's regional groups. This is a foundation which South Africa would utilise to consolidate, broaden and strengthen its trade in the AfCFTA because (i) more complementary trade opportunities would emerge which could be harnessed in addition to current opportunities; (ii) African markets would open up more as trade barriers are reduced further, allowing products more access; (iii) current trade linkages with regional groups would strengthen as trade barriers are reduced, thus broadening the scope of South Africa's trade in Africa; and (iv) regional value chains and production clusters initiatives would arise as market access improves as well as when new and dynamic areas of comparative advantages emerge. While the AfCFTA offers opportunities for countries to tap into under-exploited export markets in other countries and to import cheaper inputs, there are challenges in accessing and utilising such opportunities due to various non-tariff barriers like trade infrastructure; unharmonised trade facilitation, documentation and procedures; as well as stiff competition.

Introduction

Trade in goods and services is a channel through which developments in one country can spill over into other countries. This is through, among other things, (i) access to cheaper inputs which improve productive capacities of domestic industries; (ii) providing a wider variety of goods to domestic consumers; (iii) motivating the development of production linkages through value chains as different products bring with them different richness or rare qualities to production linkages; and (iv) developing new and dynamic comparative advantages. To this end therefore, efforts have been made to promote linkages between countries in Africa through various economic integration arrangements. Although Africa's trade links with Europe, the United States and increasingly with Asia, are still stronger than its trade links within the region, intra-Africa trade and linkages have strengthened in recent years, as shown by trade data available from trade databases available at <http://www.trademap.org>, <http://www.UNCTAD.org> as well as <http://www.statssa.org>. African Union (2024) also noted that, contrary to past trends, African countries are engaging in more intra-African trade. Improved regional infrastructure through the Programme for Infrastructure Development in Africa, and improved implementation of existing free trade agreements, as well as enforcement of new ones like the Tripartite Free Trade Area Agreement and the AfCFTA Agreement would help to increase the scale and importance of intra-Africa trade.

South Africa is the largest economy in southern Africa and its linkages with sub-Saharan Africa are strong and steadily strengthening through the expansion of investment by its companies and institutions into various sectors in sub-Saharan Africa, as shown in various research articles, including Ramkolowan,

Craig and Munro (2018), UNCTAD (2018), FDI Intelligence (2016), Sandrey (2015), Loots and Kabundi (2012), Mutambara (2007) and Thomsen (2005). Furthermore, membership in the Southern African Development Community (SADC) and the Southern African Customs Union (SACU) has led to a deepening of South Africa's trade and investment linkages in sub-Saharan Africa. This has enabled South Africa to diversify the market orientation of its exports, thus, playing a significant role in the structure of intra-sub-Saharan Africa trade. As a well-developed economy in Africa, South Africa is often regarded as an important intra-regional import source than as an export destination, as evidenced by its huge and increasing trade surplus with African, which continuously rose from US\$3.3billion in 2001 to US\$20.3billion in 2023, as per trade data from the International Trade Centre available at <http://www.trademap.org>. Being an important intra-regional import source has implications for South Africa to utilise more fully its current industrial base to try and meet some of Africa's import demand.

On 30 May 2019, the AfCFTA entered into force, 30 days after the deposit of the 22nd instrument of ratification, as specified in Article 23 of the Agreement (Tralac, 2019). On 7th October 2022, the AfCFTA Secretariat launched the AfCFTA Guided Trade Initiative to allow commercially meaningful trade under the Agreement to commence for 8 participating countries (Cameroon, Egypt, Ghana, Kenya, Mauritius, Rwanda, Tanzania, and Tunisia). These countries represent five regions of Africa and are being used to pilot the operational, institutional, legal and trade policy environment under the AfCFTA (Tralac, 2023). The AfCFTA presents a bigger and more accessible market for South Africa and by becoming a member, South Africa is signalling that it intends to play a meaningful role in intra-Africa trade. South Africa's participating in intra-Africa trade in the context of the AfCFTA, would give it more opportunities to (i) develop and strengthen more its role as an intra-regional import source; (ii) use its relatively more developed economic infrastructure (compared to most African countries) to initiate and foster regional value chains and promote joint production; and (iii) utilise more fully its current industrial base as well as to develop this further.

This research article examined the current nature of South Africa's trade with Africa and implications for South Africa in intra-Africa trade with the AfCFTA in place. This was done by analysing South Africa's current trade with Africa regarding (i) products traded; (ii) the extent of trade complementarity; (iii) bilateral trade intensity with regional economic integration arrangements in Africa to give insights into the extent and strength of its trade linkages with these regional group; and (iv) its trade integration dimension with Africa. All these aspects have implications for South Africa's participation in intra-Africa trade in the AfCFTA.

Theoretical framework

Several authors including Marinov (2014), Khadan & Hosein (2013), Shakur & Ness (2011), Kandogan (2008), and Schiff & Wang (2007) agree with the Natural Trading Partner Hypothesis which argues that for countries considering forming a free trade area (FTA), high initial volume of trade and strong trade linkages between the prospective member states are important because the FTA will reinforce their existing trading relations which would enhance intra-FTA trade and reduce welfare losses due to trade diversion. Furthermore, some authors including Khadan & Hosein (2013), Shakur & Nees (2011), Kandogan (2008), and Schiff (2001) have argued that apart from high levels of bilateral trade, it would be preferable for the potential FTA members to have strong and improving complementary or competitive trade structures for the FTA to be more welfare enhancing. Furthermore, having diverse comparative advantage structures would result in efficiency gains from comparative cost differentials which would lead to an optimal economic welfare outcome in the grouping.

Methodology, techniques and procedures

The research paradigm was positivist, and the empirical approach was quantitative in nature, based on the analysis of publicly available secondary data sources (Creswell and Creswell, 2018:41). Indexes used to provide empirical evidence for this research are the Trade complementarity index, the Revealed trade preference index, the Revealed trade barrier index, and the Africa regional integration index. Trade

data for empirical analysis in this research paper were obtained from the International Trade Centre trade database available at <http://www.unctad.org> and <http://www.trademap.org>.

Trade Complementarity Index

Trade Complementarity Indexes (TCI) provide useful information on the prospects for intra-regional trade by showing how well the structure of a country's exports match or complement the import requirements of another country. Thus, this can be used to determine the extent to which countries are natural trading partners in the sense that one country's imports overlap with another country's exports. TCI approximate the adequacy of country j 's export supply to country i 's import demand by calculating the extent to which country i 's total imports match country j 's total exports. The trade complementarity index is given by the equation below.

$$TCI_{ij} = 100 [1 - (\sum |Y_{ki} - X_{kj}|) / 2] \quad [1]$$

Where:

Y_{ki} = the share of good k in all imports of country i ; and X_{kj} = the share of good k in all exports of country j . $TCI_{ij} = 0$ if there is no overlap at all; $TCI_{ij} = 100$ if imports and exports match perfectly (Hosein, Boodram and Saridakis, 2021:11; WITS, 2018; Ibrahim and Shehu, 2016:192; Mathur, *et al*, 2016:7; Vahalik, 2014:712; UNCTAD and WTO, 2012:30).

The TCI can be calculated from the perspective of each country to a trade agreement because while country i 's import structure may not match country j 's export structure, country j 's import structure may match country i 's export structure, thus indicating trade complementarity from country j 's perspective. Analysing TCIs over a period of years helps to determine whether countries' trade profiles were becoming more complementary.

Revealed trade barriers index

Revealed trade barriers (RTB) indexes seek to establish whether imports by country j of a particular commodity k from country i are more (or less) important compared to country j 's total imports of that commodity from all sources. The index is calculated using the following formula:

$$RTB_{jik} = \frac{M_{ik} / \sum M_i}{\sum M_k / \sum M} \quad [2]$$

Where:

$M_{ik} / \sum M_i$ = the share of commodity k in country j imports from country i

$\sum M_k / \sum M$ = the share of commodity k in world imports

M_{ik} = imports of commodity k from country i by country j

$\sum M_i$ = total imports from country i by country j

$\sum M_k$ = total world imports of commodity k

$\sum M$ = total world imports

If $0 < RTB_{jik} < 1$, then it may be concluded that country i is exporting relatively more of commodity k to the rest of the world than to country j . Thus, there is possibly discrimination against commodity k originating from country i going into country j . If $RTB_{jik} = 1$, there is no discriminatory trade barrier against commodity k from country i in country j . If $RTB_{jik} > 1$, country j is importing more from country i than expected. There is possibly preferential treatment of commodity k originating from country i going into country j (Mutambara, 2017:99; Kalaba, *et al*, 2005:77; Wilcox and van Seventer, 2005:200).

Bilateral trade intensity index

To measure and examine regional intensity of trade between South Africa and the regional economic integration arrangements in Africa, this research used the *trade introversion index* (TI_i), as noted by Hamanaka (2015:5), Iapadre & Luchetti (2010:4) or the bilateral *revealed trade preference index* (RTP_{ij}) as noted by Iapadre & Tajoli (2013:8) and Iapadre & Tironi (2009:9). This is because the most widely used and well-known bilateral trade intensity index (I_{ij}) (see Appendices) and its variations have some limitations, *viz.* range variability, range asymmetry, and dynamic ambiguity, which have to be corrected

for as noted by Hamanaka (2015:4-5), Iapadre & Tajoli (2013:S93), Iapadre & Luchetti (2010:4) Iapadre & Tiron (2009:7-10), Iapadre (2006:68-69) and Iapadre (2004:7-9). The bilateral revealed trade preference index (or the trade introversion index) is thus deemed robust and free of all the three limitations which other trade intensity indexes face, because all these limitations are corrected for (Hamanaka, 2015:2, 4-5; Iapadre & Tajoli, 2013:S93, 8; Iapadre & Luchetti, 2010:4-5; Iapadre & Tiron, 2009:7-9; Iapadre, 2006:68-71; Iapadre, 2004:8-9, 11-12, 14). The RTP_{ij} thus shows the *relative bilateral trade intensity* between two regions, i and j (i.e. region i 's introversion towards region j), and is given by:

$$RTP_{ij} = (HI_{ij} - HE_{ij}) / (HI_{ij} + HE_{ij}) \text{ -----} [3]$$

Where: $-1 \leq RTP_{ij} \leq +1$.

HI_{ij} is the *homogeneous bilateral trade intensity index* and HE_{ij} is the homogeneous intensity to the rest of the world excluding the partner country (i.e., the *extra-regional homogeneous trade intensity* between the regions) and is the complementary indicator for HI_{ij} (see Appendices).

$RTP_{ij} = -1$ indicates no bilateral trade; $RTP_{ij} = 1$ indicates only bilateral trade (or no extra-regional trade); and $RTP_{ij} = 0$ indicates geographic neutrality (Hamanaka, 2015:2; Iapadre & Tajoli, 2013:8; Iapadre & Luchetti, 2010:5; Iapadre & Tironi, 2009:9). The bilateral RTP , unlike all the other trade intensity indices is perfectly symmetric, as $RTP_{ij} = RTP_{ji}$ independently of country size (Iapadre & Tajoli, 2013:8; Iapadre & Tironi, 2009:9; Iapadre, 2004:12).

The trade integration dimension

The trade integration dimension of regional integration measures/assesses the extent to which a country trades with others in the region. It also estimates the potential for integration at a deeper level by noting whether a country has signed or ratified the agreement establishing the Free Trade Area. As noted by African Union et al (2020:20-22; 2019:15, 17-19; 2016:11) and United Nations Economic Commission for Africa (2019:16-34), the Africa Regional Integration Index (ARII) uses four indicators to assess trade integration, viz: (i) Share of intra-regional exports over GDP which measures the value of the goods that a country has exported within the region as a percentage of that country's gross domestic product; (ii) Share of intra-regional imports over GDP which measures the value of the goods that a country has imported from within the region as a percentage of that country's gross domestic product; (iii) The share of intra-regional trade which is the sum of a country's exports and imports within the region as a proportion of the region's intra-regional trade; (iv) Average intra-regional import tariffs which seeks to capture the effect of policies that enhance or inhibit trade openness. It measures the *ad valorem* equivalents of the minimum rates of the tariffs that a country has levied on its imports from the other countries in its region; and (iv) The AfCFTA indicator which shows whether countries have signed or ratified the AfCFTA Agreement. This is measured for individual countries, not for regional economic communities, where Ratification = 2; Signed = 1; not signed = 0 (African Union, et al, 2019:103).

Results and discussions

Structure of South Africa's products traded with Africa (2001-2021)

Table A-1a (Appendices) shows that South Africa's major exports to Africa are manufactured goods (SITC 5 + 8 less 667 and 68) which constituted 62.2%-74.6% of its total exports to Africa. Table A-1b (Appendices) shows that these products are of various levels of skill and technology intensity, viz. (i) high value-added manufactures made up of medium skill- and high skill & technology-intensive manufactures, which jointly made up 58.5%-70.1% of South Africa's manufactured exports to Africa; (ii) low skill and technology-intensive manufactures, which contributed 15.9% - 33.8% of South Africa's manufactured exports to Africa; and (iii) labour-intensive and resource-intensive manufactures, whose share was 7.7%-15.0% of its manufactured exports to Africa. Some of South Africa's high value-added manufactured exports to Africa are products in which it has maintained a comparative advantage since 1995, for example, Motor vehicles, Trailers and semi-trailers, Chemicals, Petroleum products, Fertilisers, and Food processing machines (UNCTAD, 2023). Some of the labour-intensive and resource-intensive manufactured exports to Africa are goods in which it has maintained its strongest comparative advantage

since 1995, for example, Silver and platinum, Iron ore concentrates, Ore and concentrates of base metals and precious metals, and Processed wood, Pig iron and spiegeleisen (UNCAD, 2023).

Having high value-added manufactured goods as major exports to Africa shows that Africa serves as an important market for South Africa's manufactured products with greater skill and technology content. This is beneficial to both South Africa and African countries as this has developmental potential for both. South Africa benefits from having a geographically near testing ground and market for its manufactured products, while African countries benefit from a nearby source for high value-added products which they cannot produce more efficiently than South Africa. While Africa is a small market in terms of consumers' purchasing power due to the generally lower levels of per capita income; its geographical nearness and improved infrastructure developments due to various infrastructure projects mean a nearer export destination for South Africa's high value-added manufactured goods. With the AfCFTA in place, and the African market becoming more accessible to South Africa's high value-added manufactured goods, this would give additional stimuli for South Africa to strengthen its position as a key exporter of high value-added manufactured goods into African countries. Furthermore, South Africa would be able to use its export trade in manufactured goods with Africa as a basis to utilise more fully its existing industrial capacities and capabilities as well as developing and strengthening its industrial base even further to meet some of the Continent's import demand for manufactured goods in general, and high value-added manufactured, in particular.

Table A-2a (Appendices) shows that South Africa's major import from Africa is Fuels (SITC 3). These comprise Petroleum gases and oils, other non-Petroleum gases and oils like gaseous hydrocarbons, coal gas, and oils obtained from bituminous minerals. Such imports are essential to augment South Africa's own Mineral fuels resource endowments to give further support to its industrial base. South Africa's manufactured imports from Africa are manufactured products of various levels of skill and technology intensity (Table A-2b, Appendices), but especially low value-added manufactures (like labour-intensive and resource-intensive manufactures) and Low-skill and technology-intensive manufactures, which jointly contributed 28%-68% of its manufactured imports from Africa. From 2008, the share of Medium-skill and High-skill and technology intensive manufactures which South Africa imported from Africa has been rising, and jointly contributed 31.3%-71.9% of its total manufactured imports from Africa.

The results in Tables A-1 and A-2 (Appendices) are consistent with the type of products that are expected to be traded given the vast differences in the levels of industrial development between South Africa and the rest of Africa. South Africa has a more developed and diverse industrial base; thus, it is expected to export mainly high value-added manufactured products to Africa. Since most African countries are at much lower levels of industrial development, it is expected that South Africa's imports from them would mainly be low value-added manufactures. Some of the African countries have maintained a comparative advantage in some of the low value-added manufactured goods since 1995, as shown by UNCTAD trade data available at <https://unctadstat.unctad.org/datacentre/dataviewer/US.RCA>. Thus, South Africa is a significant market for Africa's low value-added manufactures, and easier access into this market with the AfCFTA in place, would help African countries to develop further their respective industries for these products.

Trade complementarity in South Africa's trade with Africa (2001-2020)

Trade complementary indices (TCI) were calculated and used to indicate the extent to which South Africa-Africa trade is complementary. Table A-3a (Appendices) shows that there is a very high match between South Africa's export offers (export structure) and Africa's import demand (import structure), as shown by $71.8 \leq TCI_{ij} \leq 81.3$. However, Table A-3b (Appendices) shows that Africa's export offers (export structure) moderately match South Africa's import demand (import structure), as shown by $50.0 \leq TCI_{ij} \leq 64$. Therefore, South Africa's export offers complement Africa's import demand a lot more than Africa's export offers complement South Africa's import demand. However, over the years, Africa's export structure has become relatively more complementary to South Africa's import structure, as shown by rising trade complementarity indexes, i.e., from $TCI_{ij} = 52.2$ in 2001 to $TCI_{ij} = 63.7$ by 2020.

Trade complementarity indexes do not say whether the amount supplied by one trading partner satisfies the import demand of the other trading partner, or alternatively whether the export amount is not too high to be absorbed by the importing partner. However, high and improving trade complementarities in South Africa-Africa trade opens possibilities for more trade opportunities and improved production by South Africa and the other African countries to match each other's import demand more. With both tariff and non-tariff trade barriers reduced further with the AfCFTA in place, current complementary trade structures between South Africa and Africa would be exploited more fully for mutual benefit. Furthermore, the Natural Trading Partner Hypothesis argues that where potential FTA members have strong and improving complementary or competitive trade structures, the free trade agreement would be more welfare enhancing. By addressing the various tariff and nontariff barriers as well as putting in place adequate trade and investment facilitating measures, the AfCFTA would create more favourable conditions and environment for South Africa to promote its industrial base through joint production and developing stronger regional value chains with other African countries.

The AfCFTA brings stiffer competition as markets open up more. Therefore, both South Africa and other African countries, would need to continuously innovative and investigate opportunities to develop new and dynamic areas of comparative advantage by taking advantage of regional value-chain frameworks in different sectors. Furthermore, using better technology, higher-quality inputs, and updating marketing techniques would remove bottlenecks to utilising existing trade complementarities more fully. This would translate into improved levels of industrial development which would ensure high value-added manufactured goods to be products of comparative advantage as well as a significant part of bilateral trade complementarity between countries.

Market access for South Africa's exports (2001-2021)

Both tariff and non-tariff barriers have implications for the ease with which markets are accessible to trading partners. Ease of market access promotes more trade which in turn helps to facilitate industrial development as countries will be motivated to produce more for the easily available markets. Revealed trade barrier indexes (RTB_{ik}) for imports of commodities from one country by another are often used to indicate whether there is possibly discrimination against (or possibly preferential treatment to) a commodity originating from another country.

Table A-4 (Appendices) shows that South Africa's exports which have easiest access into African markets are (i) Resource-based manufactures which are agro-based; (ii) Other Resource-based manufactures which are not agro-based; (iii) Low technology manufactures other than textile, garment, and footwear; and (iv) Medium technology manufactures, process. Each of these categories of exports has $RTB_{ik} > 1$ throughout the period. As markets open more with the AfCFTA in place, this would benefit South Africa as it would be able to access these markets more. The ripple effects would be increased motivation for South Africa to utilise more fully its current installed industrial capacities to produce more and export to the easily accessible African markets.

While South Africa's high technology manufactures experienced discriminatory trade barriers throughout the period (i.e., $RTB_{ik} < 1$, as shown in Table A-4, Appendices), they still accounted for 26% - 35% of its manufactured exports to the African Continent (Table A-1(b), Appendices). The opening up of African markets with the AfCFTA would help improve market access for this category of South Africa's major manufactured exports to Africa. This would help South Africa to develop its industrial base further as well as creating opportunities to develop and pursue new and dynamic areas of comparative advantage.

South Africa's trade linkages with Africa (2002-2021)

Table A-5 (Appendices) shows that the share of South Africa-Africa trade in South Africa's total trade has been growing over the years, from a mere 9.17% in 2001 to 19.23% by 2019 before the onset of the COVID-19 pandemic, which saw a general fall in global trade. South Africa-Africa trade overtook South Africa-USA trade after 2004 and South Africa-Germany trade after 2006. From 2009, China became South Africa's major trading partner after Africa.

As Figure 1 (Appendices) shows, African countries have multiple memberships in regional groups in Africa. Due to overlapping memberships, only five regional groups were considered, and their bilateral trade intensity with South Africa were calculated. These regional groups are the Arab Maghreb Union (UMA), the East African Community (EAC), the Economic Community of Central Africa States (ECCAS), the Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC). Table A-6 (Appendices) shows the extent to which trade between South Africa and these regional groups is biased (or oriented) towards each other, thus showing the strength of their trade linkages or the extent to which South Africa and these regional groups regard each other as significant trading partners.

The results for inter-regional trade intensity (RTP_{ij}) between South Africa and the regional groups show that the strength of the trade linkages varies, with some trade linkages stronger than others. South Africa and the Arab Maghreb Union have a negative trade bias towards each other, as shown by the negative index throughout the period considered (i.e., $-0.71 \leq RTP_{ij} \leq -0.23$). Therefore, South Africa and the Arab Maghreb Union have weak trade linkages, and thus do not regard each other as significant trading partners. South Africa-ECCAS, as well as South Africa-ECOWAS, have moderate trade linkages as shown by the moderate-to-high trade bias towards each other, and reflected by the indexes $0.62 \leq RTP_{ij} \leq 0.96$ and $0.54 \leq RTP_{ij} \leq 0.85$, respectively. South Africa and the EAC have strong trade linkages, as shown by a high index of $0.78 \leq RTP_{ij} \leq 0.89$. South Africa's strongest trade linkages are with SADC in which it is a member, as shown by a very high index of $0.83 \leq RTP_{ij} \leq 0.94$. Therefore, South Africa and the EAC as well as South Africa and SADC consider each other as very significant trading partners. South Africa and the African Continent have strong trade linkages as shown by the indexes $0.76 \leq RTP_{ij} \leq 0.89$. Therefore, South Africa still considers the African Continent as a significant trading partner despite having its major trading partners outside Africa, where China, France, Germany, and the USA jointly accounted for 28.5% - 32.8% of South Africa's total trade in 2001-2020, with that share rising to 52.5% in 2021 (Table A-5, Appendices).

The current trade linkages which South Africa has with the regional groups would be strengthened by further reduction in trade barriers with the AfCFTA in place, thus enabling South Africa and the regional groups to trade more intensively with each other. Strengthening of current trade linkages between South Africa and the regional groups would enable them to: (i) harness more fully existing (and new) trade complementarities; (ii) explore and harness joint production and developing stronger regional value chains; (iii) utilise more fully current installed industrial capacities; and (iv) develop new and dynamic areas of comparative advantage. Furthermore, improvements in provision of adequate infrastructure in Africa would strengthen current trade linkages between South Africa and the regional groups and enhance its role in intra-Africa trade. To close the infrastructure gap, the infrastructure integration Programme for Infrastructure Development in Africa (PIDA) was launched in 2021, and the African Union Commission (2019:12) noted that this programme seeks to develop a regional and Continental vision, policies, and strategies for infrastructure development. When trade is more interconnected, Africa's small economies will be able to access larger markets and regional hubs in the region, and thus be able to use imports from these markets to grow. This makes trade integration a key element in the African Continent's ongoing integration journey.

Extent of South Africa's trade integration in the African Continent (2001-2021)

South Africa's trade is well integrated in Africa's trade showing that the African Continent is important as both an export destination and an import source. This is shown by the continuous increase in South Africa's trade share in intra-Africa trade, e.g. (i) the share of its exports within Africa as a percentage of its own GDP rose from 3.12% in 2002 to 11.05% by 2020, (ii) the share of its imports from within Africa as a percentage its own GDP rose from 0.77% in 2002 to 4.09% by 2020; and (iii) its share in intra-Africa trade rose from 14.43% in 2002 to 20.21% by 2020 (Table A-7a, Appendices).

Implementing trade policies that enhance accessibility of its market to other African countries, serves to further integrate South Africa's trade with Africa. Over the years, South Africa's tariff rates have been falling, where: (i) Ores and metals tariffs were reduced from 1.75% in 2000 to 0.95% by 2020; (ii) tariff rates

for Chemical products were reduced from 2.95% in 2000 to 2.03% by 2020; and (iii) Machinery and transport equipment tariff rates were reduced from 3.37% in 2000 to 2.84% by 2020. Relatively higher import tariffs have been on Manufactured goods from 6.11 in 2000 to 8.66% in 2020, and Other manufactured goods from 9.04% in 2000 to 13.8% in 2020 (Table A-7b, Appendices).

Furthermore, South Africa has consistently extended preferential treatment to Primary products imports from other African countries. For example, Table A-7c (Appendices) shows that (i) in most years, preferential treatment was given for Resource-based manufactures (other); and (ii) after 2010, preferential treatment was given to Resource-based manufactures (Agro-based) and Medium technology manufactures (Processes). South African Revenue Service (SARS) (2024a) and Tralac (2020:2; 2018:3, 4) note that most imports from SACU and SADC (regional groups in which South Africa is a member) enter South Africa duty-free. As per the SARS Customs and Excise Tariff Schedule, most of South Africa's imports from the AfCFTA are mostly imported duty-free, and MFN applied tariffs are levied on those that do not have duty-free status (SARS, 2024a).

South Africa's trade is already well integrated with Africa's trade, and therefore, as markets become more accessible with the AfCFTA in place, South Africa's trade could further integrate into Africa's trade. This would enable the South Africa to harness more fully the existing trade opportunities as well as new trade opportunities that would emerge. However, there are potential challenges which South Africa (and any African country) might face in accessing each other's markets and thus fully integrating and harnessing more fully expected benefits of the AfCFTA.

Accessing trade opportunities in the AfCFTA

Accessing each other's markets under the AfCFTA, requires countries to submit their legally implementable and reciprocal schedules of tariffs concessions according to the modalities of the Ministerial Directive on the Provisional Application of Schedules of Tariff Concessions. In accordance with the agreed modalities, their tariff schedules should cover at least 90% of tariff lines and have this verified to be compliant with the modalities for tariff liberalisation. Only then would countries trade preferentially among themselves (SARS, 2024b; Erasmus 2024a). The Southern African Customs Union (SACU) in which South Africa is a member had their tariff concessions verified, and by February 2024, Algeria, Cameroon, Egypt, Ghana, Kenya, Rwanda, and Tunisia had put in place the required necessary domestic legal measures for the implementation of their respective tariff reduction commitments and were legible to trade with South Africa under the AfCFTA, while South Africa continued to access markets in SADC countries under the SADC Trade Protocol (SARS, 2024b). By March 2024, Erasmus (2024b) noted that forty-five Provisional Schedules of Tariff Concessions had been submitted and verified by the AfCFTA Secretariat as compliant with negotiating modalities (Djibouti, Libya, Mozambique, Somalia, the Saharawi Republic, and Sudan were still to submit their tariff offers) therefore, increasing opportunities for African countries to trade preferentially among themselves under lower AfCFTA preferences.

Potential challenges in accessing trade opportunities

The AfCFTA offers opportunities for countries to tap into under-exploited export markets in other African countries outside of their own regional groupings, as well as opportunities to import possibly cheaper intermediate and raw materials inputs from African countries outside their regional groupings. However, challenges in harnessing more fully trading opportunities from the AfCFTA would arise from (i) the diversity of official languages (e.g., Arabic, English, French, Portuguese, Spanish, and Swahili) which call for multiple translations of trade facilitating documents; (ii) different institutional arrangements in countries and their abilities (or lack of) to effectively monitor, enforce and implement provisions of the AfCFTA that seek to facilitate trade; and (iii) use of multiple currencies between African countries which adds to transaction costs.

Proper harmonisation (or lack thereof) of institutional barriers and trade facilitation measures between countries is another challenge and Mutambara (2009:514-515) noted challenges due to increased

transport costs that hinge on differing regulations in countries through which goods pass, e.g. (i) complicated and unharmonised customs border procedures, requirements and documentation, (ii) inefficient border infrastructure and services; (iii) differences between countries regarding axle load limits and vehicle dimensions, documents accompanying goods being traded, vehicle licensing and insurance issues, road user charges and bond guarantee schemes. Some of these challenges continue to negatively impact intra-Africa trade and currently appear among the top ten non-tariff barriers that constrain trade among African countries, viz., (i) Issues related to rules of origin; (ii) Lengthy and costly customs clearance procedures; (iii) Costly road user charges/or fees; (iv) Issues related to transit; (v) Export subsidies; (vi) Additional taxes and other charges; (vii) Inadequate trade related infrastructure; (viii) Government policy and regulations; (ix) Technical barriers; and (x) Inadequate/ unreasonable customs procedures and charges, in that order (COMESA-EAC-SADC, 2024).

Africa countries are at different levels of economic development and the implementation of the AfCFTA has implications for distribution of economic benefits between African countries. Cattaneo (2009:532) noted the debate on whether the bigger market that results from an economic integration arrangement between countries of unequal size (or levels of development) will (where internal scale economies are important), mainly benefit producers in larger countries, in this case South Africa. Alternatively, would the AfCFTA lead to smaller countries gaining significantly from regional economies of scale as noted by Cline (1982 cited in Cattaneo, 2009:533) since they would no longer be producing at higher costs for their domestic markets. Furthermore, government revenue for some African countries largely depends on tariff revenue from the very tariffs which the AfCFTA seeks to reduce further. Therefore, questions and uncertainties on distribution of economic benefits and whether there will be a compensation mechanism for a mutual beneficial arrangement in the AfCFTA has implications for African countries' collective commitment to the AfCFTA agenda and its implementation thereof.

The AfCFTA would give rise to a competitive business environment in Africa by promoting competition and addressing restrictive business practices. Just like any other African country, South Africa would have to face intense competition to access and harness trade opportunities. For example, South Africa would face competition from Egypt, which is one of Africa's few industrial heavyweights, which ranked 2nd after South Africa in 2023 as an African country exporting to Africa. OECD, et al. (2022:142) note that most of Egypt's African exports are manufactures (61.5% of its total exports to Africa), while its African imports are mainly primary ones (83.3% of its total imports from Africa). Among its top manufacturing exports to Africa are chemicals (16.5%), non-metallic mineral manufactures (8%) and plastics (6.8%). Petroleum and gas continue to contribute a large share of its exports to Africa (14.5%) and an even a bigger share of its imports from Africa (25%). Other important imports from Africa include non-ferrous metals (19%) and coffee, cocoa, tea, and spices (14.2%). Therefore, it is suggested that with the AfCFTA in place, Egypt could leverage its current position as one of Africa's key industrial and export hubs to strengthen its position.

Conclusion

Even though South Africa's major trading partners are outside Africa, trade with Africa is still very important for South Africa. Article 4 of the AfCFTA Agreement would improve market access into Africa's markets through further reduction in trade barriers, and this would enable South Africa to continue to strengthen its trade relations and linkages with African countries.

South Africa's major exports to Africa are mainly high value-added manufactures, few low skill & technology-intensive manufactures, and few resource-intensive manufactures. Therefore, Africa is an important market for South Africa's manufactured products with greater skill and technology content. Such products have developmental benefits for both because South Africa has a testing ground and market for its manufactured products, and a geographical close and easier to access market; while African countries benefit from high value-added products which they may not produce more efficiently than South Africa. South Africa's major imports from Africa are mainly mineral fuels and non-fuel primary commodities. While South Africa imports manufactured goods from Africa, these are mainly low value-added manufactures, with high value-added manufactures contributing very little to its major imports

from Africa. This structure of exports and imports is due to the significantly different levels of industrial development between South Africa and the rest of Africa.

The RTP_{ij} indexes show that South Africa has strong trade linkages with most of the regional groups considered. With increased market access in the AfCFTA, these trade linkages would be strengthened as per the Natural Trading Partner Hypothesis, as South Africa already trades intensively with the regional groups. The RTB_{ik} indexes show that there is ease of market access for South Africa's products into Africa's markets. With the AfCFTA in place, market access for South Africa's products would improve further, thus providing opportunities for trading more with the rest of Africa and to develop its industrial base further to harness more fully the wider and more accessible market.

Trade complementarity (TCI_{ij}) between South Africa and Africa is high, and Africa's export structure has become more compatible with South Africa's import structure. This provides opportunities for promoting industrial development through pursuing opportunities for joint production, harnessing regional value chains, and developing new and dynamic areas of comparative advantages. Such opportunities would become more available with the AfCFTA in place.

While the AfCFTA offers opportunities for countries to tap into under-exploited export markets in other African countries, as well as opportunities to import cheaper inputs, there are challenges in accessing and utilising such opportunities due to various non-tariff barriers like trade infrastructure; unharmonised trade facilitation, documentation, and procedures; as well as stiff competition.

Limitations of the study

From the time the AfCFTA entered into force in May 2019 to the present, the AfCFTA is barely 5 years old. Therefore, the limited timespan of the AfCFTA currently constrains empirically judging the effectiveness of the AfCFTA and exact trade dynamics between South Africa and other African countries in terms of, among other things (i) successfully accessing markets given the current non-tariff barriers, (ii) developing and strengthening regional value chains, (iii) strengthening its own industrial base due to harnessing trade potentials in Africa; and (iv) and the net effect of the AfCFTA on South Africa's trade with Africa.

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APPENDICES

The most widely used and well-known bilateral trade intensity index (I_{ij}) is given by the following formula:

$$I_{ij} = (S_{ij}/W_j) = (T_{ij}/T_{iw})/(T_{wj}/T_w)$$

Where:

T_{ij} = trade (exports + imports) between reporting country i and partner country j

T_{iw} = trade between the world and country i

T_{wj} = world trade with country j

T_w = total world trade (Hamanaka, 2015:2; Iapadre & Tajoli, 2013:S93; Iapadre & Tiron, 2009:8).

$$RTP_{ij} = (HI_{ij} - HE_{ij}) / (HI_{ij} + HE_{ij})$$

where

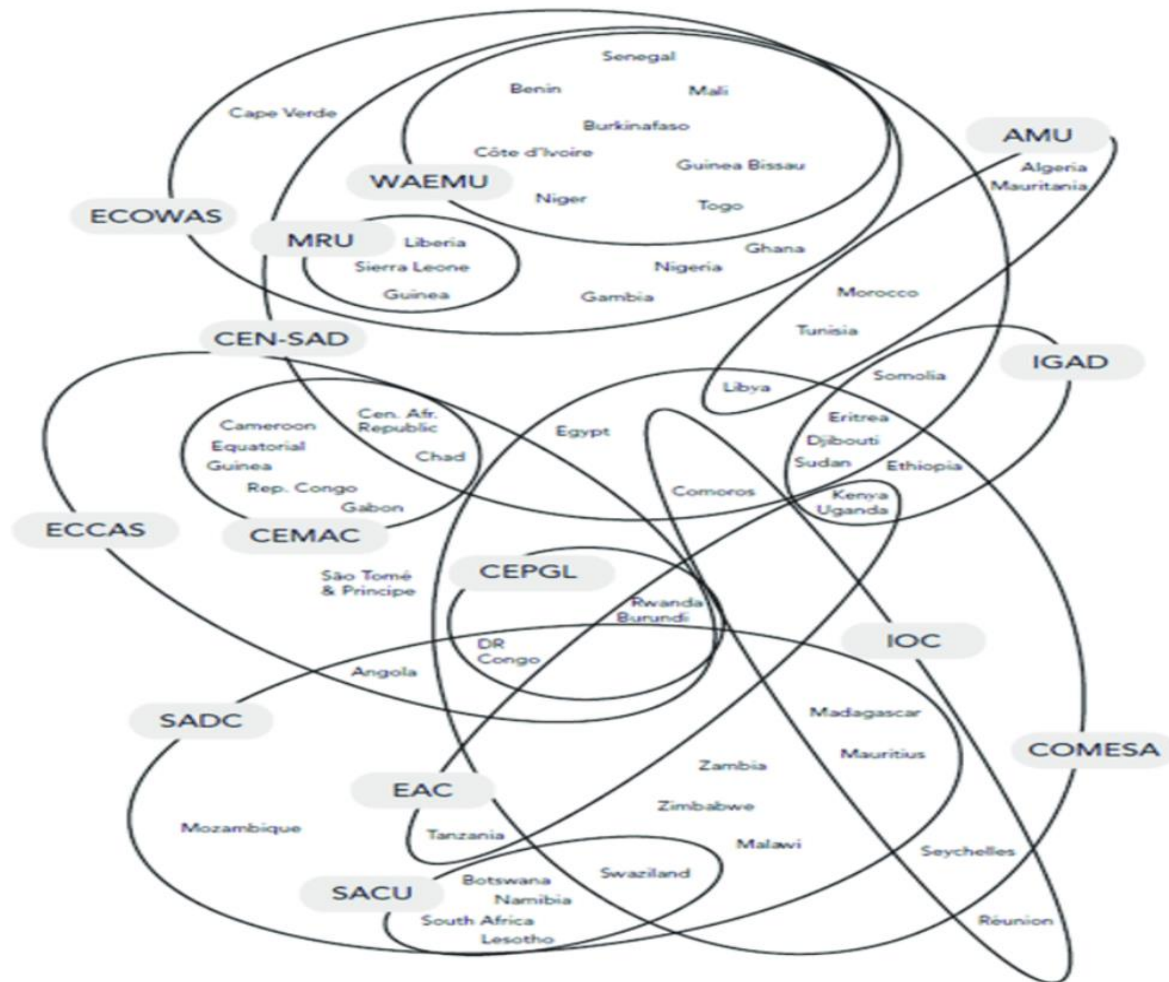
$$(HI_{ij}) = (S_{ij})/(V_{ij}) = (T_{ij}/T_i)/(T_{oj}/T_{ow}) \quad \text{and}$$

$$(HE_{ij}) = (1-S_{ij})/(1-V_{ij}) = [1 - (T_{ij}/T_i)] / [1 - (T_{oj}/T_{ow})]$$

Where: $0 \leq (HI_{ij}) \leq \infty$

T = total trade (exports + imports); T_{ij} = exports of region i to region j + exports of region j to region i [*i.e.* trade between region i and region j]; T_i = total exports of region i to the world + total imports of region i from the world [*i.e.* trade between region i and the world]; T_{oj} = exports of world excluding region i (rest of the world) to region j + imports of world excluding region i (rest of the world) from region j [*i.e.* trade of region j with the rest of the world]; T_{ow} = total exports of world excluding region i + total imports of world excluding region i (Hamanaka, 2015:2; Iapadre & Tajoli, 2013:S93; Iapadre & Tiron, 2009:8).

Figure 1: Africa's overlapping regional economic communities' memberships



Source: Wilson Center (2008:34 cited in Bilal, Vanheukelom, Byiers & Woolfrey, 2016:18).

Table A-1: Structure of South Africa trade with Africa (2001-2021)

	Period of years																				
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
(a) Structure of South Africa's exports to Africa (% of South Africa's total exports to Africa)																					
All food items	14.6	17.5	16.6	12.9	11.3	8.89	13.4	17.2	16.5	15.6	15.3	15.9	15.8	16.6	17.5	17.1	15.6	12.9	16.5	19.1	14.8
Agricultural raw materials	1.27	1.07	0.91	0.74	0.77	0.73	0.53	0.53	0.66	0.67	0.68	0.7	0.85	0.84	0.82	0.85	0.85	0.74	0.94	1.01	1.41
Ores & metals	2.00	1.71	2.2	2.6	2.66	3.82	3.62	1.69	1.56	1.57	1.36	1.49	1.32	1.70	2.91	4.71	5.01	2.6	6.09	5.98	2.18
Fuels (SITC 3)	16.5	10.3	11.9	15.5	12.4	11.8	10.9	8.96	11.6	11.9	11.6	12.6	12.2	12.1	13	12.2	12.8	15.5	13.2	9.99	14.8
Pearls, precious stones & non-monetary gold	0.10	0.21	0.23	0.03	0.02	0.01	0	0.01	0.01	0.03	1.10	1.74	2.4	2.06	2.47	2.24	1.88	0.03	1.02	1.39	0
Manuf. goods	65.2	68	68.1	68.3	72.7	74.6	71.4	71.6	69.6	70.1	69.9	67.5	67.3	66.7	63.2	62.8	63.8	68.3	62.2	62.5	66.8
Unclassified	0.45	1.09	0.06	0.04	0.01	0.10	0.14	0.09	0.01	0.06	0.13	0.09	0.06	0.07	0.04	0.07	0.07	0.07	0.05	0.06	0
(b) Structure of South Africa's manufactured exports to Africa (% of South Africa's total manufactured exports to Africa)																					
LI & RI manuf.	14.0	12.6	13.0	10.5	10.3	8.70	8.06	8.16	9.84	15.0	13.9	12.7	13.0	12.9	13.9	14.4	14.9	14.5	14.2	14.3	7.73
LS & TI manuf.	15.9	17.9	19.9	22.6	23.4	21.6	23.2	22.1	21.5	19.5	18.9	17.6	17.5	17.7	16.3	16.5	17.4	17.6	18.0	16.1	33.8
MS & TI manuf.	35.2	34.7	33.5	33.1	31.6	37.0	39.9	40.3	40.6	39.3	41.6	43.9	42.7	41.7	41.0	40.0	38.5	39.2	38.5	38.0	30.4
HS & TI manuf.	34.9	34.9	33.7	33.7	34.8	32.7	28.8	29.5	28.0	26.2	25.6	25.7	26.8	27.7	28.9	29.1	29.2	28.6	29.2	31.6	28.1

Notes:

All food items (SITC 0 + 1 + 22 + 4)

Agricultural raw materials (SITC 2 less 22, 27 and 28)

Ores and metals (SITC 27 + 28 + 68)

Pearls, precious stones, and non-monetary gold (SITC 667 + 971)

Manufactured goods (SITC 5 to 8 less 667 and 68).

LI & RI manuf. = Labour-intensive and resources-intensive manufactures

LS & TI manuf. = Low-skill and technology-intensive manufactures

MS & TI manuf. = Medium-skill and technology-intensive manufactures

HS & TI manuf. = High-skill and technology-intensive manufactures

Source: Own table derived using trade data available from the UNCTAD trade database available at <https://unctadstat.unctad.org/>

Table A-2: Structure of South Africa trade with Africa (2001-2021)

	Period of years																				
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
(a) Structure of South Africa's imports from Africa (% of South Africa's total imports from Africa)																					
All food items	15.1	10.8	10.9	7.14	5.50	3.51	3.47	2.76	4.33	12.5	12.2	10.1	9.24	7.76	10.9	11.9	13.1	10.8	11.5	14.2	40.4
Agricultural raw materials	9.56	8.25	8.41	8.02	4.84	2.54	2.40	1.75	1.94	2.12	2.42	1.69	1.75	1.45	2.02	2.43	2.46	1.71	1.75	2.70	3.33
Ores & metals	7.36	10.4	16.6	16.7	18.9	15.5	16.5	12.4	4.29	4.93	6.60	4.60	4.82	3.22	5.92	7.10	3.83	3.25	3.31	3.36	2.15
Fuels (SITC 3)	44.9	44.2	35.7	55.2	42.5	56.3	64.9	67.4	79.1	57.7	58.0	64.1	63.9	69.4	56.9	50.8	49.3	59.2	55.3	48.7	0.76
Pearls, precious stones & non-monetary gold	0.11	1.42	2.23	0.95	18.3	12.9	6.68	6.76	3.59	1.86	1.29	1.60	2.39	1.77	1.77	3.47	5.47	4.25	5.02	8.60	4.47
Manuf. goods	22.5	24.8	26.2	12.0	9.91	8.48	5.80	8.74	6.61	20.7	19.5	17.8	17.8	16.2	22.4	24.2	25.7	20.5	22.9	22.3	48.9
Unclassified	0.46	0.13	0.01	0	0	0.72	0.34	0.08	0.13	0.05	0.05	0.1	0.09	0.11	0.08	0.1	0.11	0.20	0.08	0.10	0
(b) Structure of South Africa's manufactured imports from Africa (% of South Africa's total manufactured imports from Africa)																					
LI & RI manuf.	47.7	33.5	28.8	44.9	47.1	34.6	42.6	20.5	40.8	23.0	27.2	28.2	31.2	32.1	34.1	34.5	35.6	34.5	33.4	40.4	66.0
LS & TI manuf.	16.8	11.4	8.63	12.5	11.8	17.2	8.47	7.78	7.65	5.04	6.28	6.72	7.15	7.08	6.31	6.76	6.07	7.04	6.35	6.01	2.71
MS & TI manuf.	21.3	28.9	33.6	17.9	22.8	29.5	30.6	28.5	32.1	21.3	22.5	22.3	20.4	22.7	20.3	19.3	16.9	16.6	16.6	13.7	9.08
HS & TI manuf.	14.2	26.2	29.0	24.7	18.3	18.7	18.3	43.2	19.5	50.6	44.0	42.8	41.3	38.1	39.3	39.4	41.4	41.8	43.7	39.8	22.2

Notes:

All food items (SITC 0 + 1 + 22 + 4)

Agricultural raw materials (SITC 2 less 22, 27 and 28)

Ores and metals (SITC 27 + 28 + 68)

Pearls, precious stones, and non-monetary gold (SITC 667 + 971)

Manufactured goods (SITC 5 to 8 less 667 and 68).

LI & RI manuf. = Labour-intensive and resources-intensive manufactures

LS & TI manuf. = Low-skill and technology-intensive manufactures

MS & TI manuf. = Medium-skill and technology-intensive manufactures

HS & TI manuf. = High-skill and technology-intensive manufactures

Source: Own table derived using trade data available from the UNCTAD trade database available at <https://unctadstat.unctad.org/>

Table A-3: Trade complementarities between South Africa and Africa (2001-2021)

	Period of years																				
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
(a) South Africa as the exporter (Region i) and Africa as the importer (Region j)																					
TCI _{ij}	75.2	77.8	74.1	73.8	75.1	76.2	76.2	74.8	73.3	76.6	78.7	81.3	78.8	79.7	76.3	75.2	75.1	76.6	74.7	71.8	57.9
(b) Africa as the exporter (Region i) and South Africa as the importer (Region j)																					
TCI _{ij}	52.2	53.0	52.2	52.4	50.0	51.7	52.2	54.4	55.3	53.7	54.8	55.2	56.2	59.8	60.4	63.3	60.9	61.8	61.1	63.7	45.2

Source: Own Table and calculations using UNCTAD trade data available at <https://unctadstat.unctad.org/EN/>

Table A-4: Revealed trade barrier indexes (RTB_{ik}) for South Africa's exports to Africa (2001-2021)

Categories* of exports to Africa	Period of years and the corresponding Revealed Trade Barrier indexes (RTB _{ik}) for South Africa's exports to Africa																				
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Primary products	0.73	0.90	0.81	0.70	0.74	0.62	0.56	0.64	0.67	0.52	0.47	0.45	0.48	0.52	0.73	0.85	0.75	0.66	0.65	0.81	1.25
Resource-based manufactures: agro-based	2.34	2.27	2.27	1.98	1.99	1.97	1.80	1.76	2.17	2.35	2.28	2.27	2.24	2.19	2.18	2.12	2.17	2.13	2.18	2.22	1.51
Resource-based manufactures: other	2.20	1.55	1.78	1.63	1.67	1.30	1.09	1.05	0.92	1.09	1.02	1.05	1.23	1.25	1.37	1.56	1.59	1.58	1.70	1.63	0.91
Low technology manufactures: textile, garment and footwear	0.33	0.33	0.32	0.29	0.25	0.26	0.26	0.27	0.28	0.73	0.77	0.75	0.74	0.71	0.69	0.67	0.75	0.74	0.71	0.68	0.36
Low technology manufactures: other products	1.41	1.55	1.70	1.94	1.90	1.85	1.98	1.78	1.86	1.92	1.88	1.77	1.70	1.62	1.47	1.37	1.44	1.55	1.45	1.31	2.09
Medium technology manufactures: automotive	0.82	0.84	0.68	0.60	0.69	1.05	1.10	1.47	1.42	1.40	1.51	1.60	1.52	1.44	1.18	0.96	0.92	1.01	0.96	1.01	1.15
Medium technology manufactures: process	2.13	2.17	2.05	2.05	2.01	2.08	1.87	1.79	1.90	1.59	1.59	1.67	1.80	1.76	1.80	1.77	1.88	1.83	1.90	2.03	2.19
Medium technology manufactures: engineering	0.84	0.84	0.89	0.99	0.90	1.07	1.23	1.12	1.12	1.07	1.19	1.25	1.14	1.08	1.03	0.97	0.95	1.02	0.95	0.97	0.86
High technology manufactures: electronic and electrical	0.34	0.35	0.39	0.43	0.34	0.40	0.41	0.41	0.41	0.31	0.37	0.39	0.35	0.38	0.32	0.31	0.28	0.28	0.28	0.26	0.25
High technology manufactures: other	0.48	0.45	0.38	0.43	0.63	0.64	0.53	0.63	0.42	0.48	0.44	0.43	0.38	0.40	0.40	0.38	0.39	0.38	0.39	0.34	0.51

Notes: * = Lall Classification as per trade the UNCTAD trade database.

Medium technology manufactures: process = Equipment for Casting and moulding; Machining; Joining (welding); Shearing (cutting material) and forming into a specific shape.

Source: Own table derived using trade data available from the UNCTAD trade database available at <https://unctadstat.unctad.org/>

Table A-5: South Africa's trade with Africa compared with its major trading partners (2001 – 2021)

South Africa's trading partner	South Africa's trade with each region as a percentage (%) of South Africa's total trade																				
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Africa	9.17	10.5	9.64	9.04	9.51	10.2	10.6	12.4	13.0	19.1	17.4	19.7	20.0	21.2	19.8	19.6	18.6	19.5	19.2	17.3	1.52
China	2.96	3.67	4.69	5.27	6.19	7.42	8.85	8.80	11.9	11.8	12.7	12.3	14.1	12.6	13.9	13.6	14.0	13.8	14.6	15.6	28.2
France	3.04	3.53	4.24	4.31	3.42	3.10	2.82	2.44	2.41	2.07	1.77	1.67	1.68	1.63	1.62	2.00	1.71	1.54	1.53	1.39	1.48
Germany	11.9	12.1	11.4	11.4	10.8	10.4	10.0	9.69	9.31	8.85	7.67	7.04	7.32	7.42	8.83	9.41	8.98	8.50	8.93	8.23	12.1
United States of America	12.9	11.2	11.0	10.0	9.06	9.31	9.52	9.30	8.34	7.95	7.67	7.54	6.79	6.80	7.36	6.95	7.08	6.39	6.79	7.50	10.7
China, France, Germany, USA	30.8	30.5	31.4	31.0	29.5	30.2	31.2	30.2	32.0	31.0	29.8	28.5	29.9	28.4	31.7	31.9	31.7	30.2	31.8	32.8	52.5

Notes: China, France, Germany, and the USA are South Africa's top four major trading partners.

Source: Own table derived using trade data available from the UNCTAD database available on the web link <https://unctadstat.unctad.org>

Table A-6: Inter-regional trade intensity between South Africa and the five regional groups that are part of the African Continental Free Trade Area

Regional groups	The Revealed Trade Preference indexes (RTP _{ij}) indexes between South Africa and the regional groups																			
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
AMU	-0.23	-0.46	-0.59	-0.34	-0.3	-0.46	-0.49	-0.48	-0.58	-0.42	-0.4	-0.42	-0.54	-0.34	-0.52	-0.64	-0.7	-0.71	-0.71	-0.71
EAC	0.89	0.87	0.89	0.89	0.85	0.83	0.83	0.85	0.83	0.82	0.81	0.80	0.78	0.78	0.81	0.81	0.81	0.82	0.82	0.79
ECCAS	0.81	0.8	0.73	0.72	0.68	0.66	0.74	0.64	0.66	0.62	0.74	0.75	0.76	0.90	0.92	0.95	0.96	0.91	0.82	0.67
ECOWAS	0.69	0.68	0.85	0.86	0.77	0.78	0.81	0.81	0.77	0.74	0.82	0.80	0.81	0.73	0.78	0.75	0.8	0.79	0.69	0.54
SADC	0.91	0.88	0.87	0.85	0.83	0.84	0.86	0.87	0.91	0.90	0.91	0.91	0.91	0.93	0.94	0.94	0.94	0.93	0.92	0.91
Africa	0.89	0.86	0.84	0.82	0.79	0.77	0.78	0.84	0.78	0.78	0.81	0.81	0.82	0.81	0.81	0.79	0.79	0.78	0.79	0.76

Notes: The RTP_{ij} indexes are corrected for range variability, range symmetry and dynamic ambiguity. Thus, RTP_{ij} = RTP_{ji} independently of country size.

AMU = Arab Maghreb Union

EAC = East African Community

ECCAS = Economic Community of Central African States

ECOWAS = Economic Community of West African States

SADC = Southern African Development Community

Source: Own table derived using trade data available from the ITC trade database available at <http://trademap.org>

Table A-7: Extent of South Africa's trade integration in the African Continent using the ARII four indicators (2001 – 2021)**(a): South Africa's trade integration dimension**

South Africa's trade integration dimension using the Africa Regional Integration Index's four indicators																		
2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Share of intra-regional exports over GDP (value of the goods that a country has exported within the region as a % of that country's gross domestic product)																		
3.12	2.66	2.54	1.92	2.06	2.53	3.75	3.27	6.19	6.76	7.80	8.84	9.87	9.85	10.24	10.06	10.56	11.05	11.05
Share of intra-regional imports over GDP (value of goods that a country has imported from within the region as a % of that country's gross domestic product)																		
0.77	0.68	0.86	0.68	1.27	1.55	2.25	1.48	2.21	2.51	3.503	3.94	4.76	3.81	3.83	3.65	4.89	4.68	4.09
The share of intra-regional trade (the sum of a country's exports and imports within the region as a proportion of all the region's intra-regional trade)																		
14.43	15.03	15.27	15.60	16.29	17.14	17.06	13.66	22.39	21.12	21.80	21.57	23.03	21.55	22.09	22.86	22.50	22.06	21.21

Notes: The AfCFTA indicator for South Africa = 2 because it has ratified the AfCFTA Agreement (African Union et al., 2019:103).

Source: Own table derived using trade data available from the ITC trade database available at <http://trademap.org> and Gross domestic product (GDP) data for South Africa from Statistics South Africa (2020, 2017, 2015) available at <http://www.statssa.gov.za/publications>

(b): South Africa's import tariff rates*, Most favoured nation rate (MFN rate), on non-agricultural and non-fuel products from Developing countries (M49)**

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Manufactured goods, ores and metals																				
5.87	8.66	5.84	5.75	8.65	8.55	8.39	8.27	8.16	8.24	8.06	7.99	7.95	7.91	7.92	8.06	7.97	8.16	8.22	8.21	8.21
Ores and metals																				
1.75	1.67	1.59	1.47	1.56	1.42	1.45	1.56	1.35	1.49	0.98	0.89	0.97	0.82	0.95	0.95	0.92	0.89	1.02	0.95	0.95
Manufactured goods																				
6.11	9.03	6.09	6.03	9.04	8.92	8.78	8.65	8.55	8.61	8.46	8.37	8.35	8.33	8.34	8.45	8.39	8.61	8.66	8.66	8.66
Chemical products																				
2.95	2.88	2.89	2.85	2.82	2.66	2.63	2.73	2.67	2.7	2.06	2.09	2.07	2.06	2.04	2.13	2.05	2.08	2.05	2.03	2.03
Machinery and transport equipment																				
3.37	3.41	3.35	3.27	3.18	3.16	3.06	3.11	3.08	3.1	2.86	2.88	2.82	2.83	2.83	2.87	2.82	2.84	2.83	2.83	2.84
Other manufactured goods																				
9.04	13.7	9.02	9.01	13.7	13.6	13.4	13.2	13.1	13.1	13.3	13.1	13.1	13.1	13.1	13.3	13.3	13.6	13.3	13.7	13.8

Notes: * = These tariff rates are Simple average of simple averages which is a simple average for a selected product group calculated from simple averages at HS 6-digit level. It has been calculated by dividing the sum of simple averages rates by the total number of products at HS 6-digit level under each product group.

** = The assignment of countries or areas to specific groupings is for statistical convenience by the Statistics Division of the United Nations Secretariat. This list of countries or areas includes all African countries.

Source: UNCTAD market access data from the UNCTAD trade database available at <https://unctadstat.unctad.org/>

(c): Revealed trade barrier indexes (RTB_{ik}) for South Africa's imports from Africa (2001-2021)

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Primary products																				
4.76	4.38	3.80	4.92	3.46	3.76	4.28	3.69	4.78	3.57	1.57	1.57	1.53	1.71	1.88	1.93	1.80	1.83	1.87	1.90	1.96
Resource-based manufactures: agro-based																				
0.77	0.68	0.88	0.64	0.53	0.35	0.32	0.21	0.20	1.13	1.86	1.84	1.77	1.8	1.78	1.88	1.92	1.76	1.85	1.98	1.94
Resource-based manufactures: other																				
0.81	1.48	2.20	1.59	3.40	2.54	1.83	1.52	0.61	0.85	1.16	1.38	1.52	1.56	1.82	1.92	1.90	2.19	1.88	1.83	1.83
Medium technology manufactures: process																				
0.09	0.31	0.14	0.08	0.09	0.10	0.05	0.10	0.07	0.57	1.05	1.10	1.14	1.11	1.18	1.23	1.30	1.16	1.26	1.37	1.09

Notes: Average intra-regional import tariffs which South Africa has levied on its imports from the other countries in Africa were not available. Therefore, RTB_{ij} for South Africa's imports from Africa were calculated.

Source: Own table derived using trade data available from the UNCTAD trade database available at <https://unctadstat.unctad.org>