

The effect of African Continental Free Trade Area on South African economy

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Abstract

The study examines the impact of African Continental Free Trade Area (AfCFTA) on South African economy. The policy shocks adopted in the study include the reduction of tariff rates on non-sensitive products by 90%, then followed by another reduction of 97% and finally it is erosion of tariffs and non-tariff measures for intra-Africa trade. This study applied the standard Global Trade Analysis Project (GTAP) model version 7, using database version 11. The sectors were aggregated from 65 to 38, while regions were aggregated from 141 to 42. The preliminary results indicate that implementation of trade liberalisation under the AfCFTA will bring an economy-wide impact on the South Africa economy. However, reduction in tariff leads to lower revenues derived from the custom duties. Most African states, especially the less developed countries depend on custom duties as one of their biggest contributors towards the national revenue. South Africa is expected to realise overall (Equivalence Variation) gain as results of diversified markets created intra-Africa trade. The total outputs of selected industries are expected to increase, which translates into positive multipliers through the entire economy. South Africa is competitive producers of agriculture, manufactured and other commodities in Africa, which stands a chance to benefit from positive trade balance. The findings aim to inform trade and development policy space by reflecting the effects to trade liberalisation under the AfCFTA.

Key words: Computable general equilibrium (CGE), African continental Free Trade Area (AfCFTA), Tariffs

1. Background

The agreement establishing the African continental Free Trade Area (AfCFTA) was signed at the 10th AU assembly extraordinary summit in Kigali in 2018. All AU member states have signed the consolidated text of the AfCFTA except for Eritrea. In 2019, the founding agreement and its protocols on trade in goods and services including a dispute settlement were entered into force, 47 countries have signed and ratified (Tralac, 2025).

The aim of the AfCFTA is to create a unified market for goods and services. Countries shall gradually eliminate tariffs and non-tariff barriers, progressively open trade in services, work together in all trade related matters, cooperate on customs issues and the implementation of trade facilitation measures, create mechanisms for resolving disputes regarding their rights, obligations, while establish and sustain an institutional framework for implementation and administration of AfCFTA. The AfCFTA tariff liberalisation envisages that 90% of Harmonised System (HS) tariff codes will be fully liberalised within 5

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years, that liberalisation of a further 7% of codes will take longer, up to 10 years, and that 3% will be excluded from liberalisation (Tralac, 2025).

AfCFTA has not become operational because countries have found it difficult to adopt tariff schedules and rules of origin. As a result, the AfCFTA decided to launch a special initiative to start trading partially under AfCFTA preferences. In 2022, the first phase of guided trade initiative was launched in Ghana. Ceramic tiles, batteries, horticultural products and flowers, avocados, palm oil, tea, rubber and components of air conditioners were products that were traded by countries that have had their provisional schedules of tariff verified by AfCFTA secretariat. The second phase was launched in 2024, South Africa shipped a consignment of goods for exports to Kenya and Ghana (Tralac, 2024).

The African Continental Free Trade Area (AfCFTA) is the most ambitious institutional effort to restructure trade relations across the African continent, with the explicit aim of transforming fragmented national markets into a unified continental economic space (Ogut, 2025, Ajewumi et al., 2024). At its core, the Agreement establishes a framework for the progressive liberalisation of trade in goods and services, supported by protocols on dispute settlement, investment, competition policy, and intellectual property, thereby forming an integrated legal and institutional architecture for continental trade governance (Nagu, 2026). This architecture is designed not merely to reduce tariffs but to create the conditions for deeper economic integration, including the movement of capital, services, and persons, as well as the development of regional value chains and industrial capacity (Agu, 2025, Ogbologu, 2024, Oloyede et al., 2025).

South Africa is the main exporter and importer of intra continental traded goods, in 2023, it accounted for 29% of total intercontinental exports followed by Nigeria (6%). During the same year South Africa accounted for 11% of total intra- continental imports, followed by Botswana (6%). It is expected that with AfCFTA, South Africa will realise economic growth when penetrating this market. Currently the intra African trade account only for 14.6%, with AfCFTA it is expected to increase to 30% (Geda and Yimer, 2022).

Various studies have examined the potential impact of AfCFTA, studies have covered the continent-wide effects, Nigeria, Kenya, Ethiopia and other African countries. Studies have been conducted for South Africa as well, Tralac (2025) analysed the impact of tariff and non-tariff reduction in South Africa, however they simulated 100% tariff reduction, 50% reduction in NTMs and combination of the two scenarios, they did not consider the current submitted tariff schedules of 90% reduction followed by 7% and 3% percent that will be exempted. Consequently, the aim of this study is to analyse the economy-wide effects of the AfCFTA on the South African economy. The economy-wide analysis of AfCFTA can highlight insights into how countries can position their policy direction. Therefore, this study assists in revealing both positive and negative effects across all agents of the economy.

2. Literature review

The institutional architecture of the AfCFTA reflects a layered and comprehensive approach to continental integration. At its core is the Agreement Establishing the AfCFTA, which is operationalised through foundational protocols on trade in goods and services, and a formal dispute settlement mechanism. These are supported by detailed annexes covering tariff concessions, rules of origin, customs cooperation, trade facilitation, and non-tariff barriers, indicating that integration extends beyond tariff liberalisation to encompass the full spectrum of trade-related frictions (Asamoah, 2024; Wapmuk & Ali, 2022). The framework is further deepened through Phase II protocols on competition policy, investment, and intellectual property rights, and Phase III protocols addressing emerging areas such as digital trade

and inclusivity. This multi-tiered structure underscores that AfCFTA is not merely a trade agreement, but an evolving institutional system aimed at reducing both policy and structural barriers to intra-African trade (Fakhouri & Mansouri, 2025; Odei-Mensah et al., 2025).

The intellectual foundation of the AfCFTA rests on earlier continental policy commitments, particularly the African Union's Action Plan for Boosting Intra-African Trade, which identifies regional integration as essential to economic transformation, job creation, and global competitiveness (Fusacchia et al., 2022). Despite this longstanding policy emphasis, scholars such as Desiderio and Tevoedjre (2025); Hoyato (2022) suggest that intra-African trade has remained low, reflecting persistent structural constraints rather than a lack of formal agreements. The AfCFTA, therefore, marks a shift from fragmented regionalism towards a continental framework designed to address these limitations through coordinated liberalisation and institutional harmonisation.

However, the operationalisation of the AfCFTA reveals a more complex trade environment than is often implied in policy discourse. Rather than replacing existing trade arrangements, the Agreement is layered onto a dense network of regional economic communities (RECs), including SACU and SADC, which continue to govern a substantial share of South Africa's trade flows. In practice, this means the immediate impact of the AfCFTA on South African trade is not uniform across markets. Trade with neighbouring countries remains governed by pre-existing preferential regimes, while new opportunities primarily arise in non-SACU and non-SADC markets across East, West, North, and Central Africa. This institutional layering introduces heterogeneity in trade conditions, complicating the transmission of policy changes into observable trade outcomes (Muftau, 2023; Oyebamiji, 2024).

From a trade-theory perspective, the AfCFTA is expected to reduce policy-induced trade costs, particularly tariffs and formal non-tariff barriers. The Agreement provides for the liberalisation of approximately 90 per cent of tariff lines (non-sensitive) over a phased period, alongside the development of complementary instruments such as rules of origin, trade facilitation mechanisms, and digital tariff schedules. Yet this expectation rests on a critical assumption: that policy reforms translate into effective reductions in total trade costs (Samunderu, 2024).

Empirical and institutional evidence suggest that this assumption is not straightforward in the African context. Trade costs in African markets are heavily shaped by structural factors, including transport infrastructure, logistics systems, border efficiency, and payment mechanisms. The introduction of instruments such as the Pan-African Payment and Settlement System (PAPSS) and the online mechanism for reporting non-tariff barriers reflects an explicit recognition that tariff liberalisation alone is insufficient to facilitate trade. Similarly, the development of Authorised Economic Operator programmes across regional blocs aims to reduce administrative and compliance-related frictions, highlighting the central role of trade facilitation in the integration process (Ndonga & Laryea, 2022; Okoroma, 2024).

In South Africa, these dynamics are particularly salient. As one of the continent's most competitive agricultural exporters, the country is well placed to benefit from expanded market access under the AfCFTA. However, its trade patterns remain strongly shaped by spatial and logistical constraints (Muftau, 2023). Existing trade flows are concentrated in geographically proximate markets, where established corridors and institutional arrangements reduce transaction costs. By contrast, penetration of more distant African markets remains limited, despite significant import demand and identified export potential (Odei-Mensah et al., 2025; Ogbologu, 2024).

Scholars such as Mutambara (2024) suggest that the early implementation phase of the AfCFTA further underscores the gradual and uneven nature of integration. South Africa's participation in the Guided Trade Initiative, which initially includes a limited set of partner countries such as Egypt, Ghana, Kenya, and Tunisia, illustrates the incremental expansion of trade under the Agreement (Luke, 2023). Moreover, tariff liberalisation follows a phased approach, with non-sensitive products subject to a ten-year reduction schedule, implying that the full effects of the Agreement will materialise only over an extended horizon. These features suggest that short-term trade responses may not fully reflect the Agreement's long-term potential (Lemma et al., 2022).

Within this context, a critical gap emerges in the literature. While existing studies and policy frameworks emphasise the potential of the AfCFTA to expand intra-African trade, there is limited empirical evidence on whether the Agreement alters the structural determinants of trade flows. It remains unclear whether reducing formal trade barriers mitigates the distance-related trade penalty that dominates trade patterns in African markets.

3. Methodology

3.1 Database

The study adopts GTAP database version 11 which consists of at least five base years (2024, 2007, 2011, 2014 and 2017). This version has 141 regions, and 65 sectors that are mapped into 42 regions and 38 sectors. Detailed explanation of GTAP database version 11 is contained in Aguiar et al., (2022).

Commodities: Peddy rice; Wheat; Cereal grains; Vegetables, fruit and nuts; Oil seeds; Sugar cane and sugar beet; Plant-based fibres; Crops; Bovine, cattle, sheep and goats; Animal products; Raw milk; Wool, silk-worm cocoons; Forestry; Fishing; Coal; Oil; Gas; Minerals; Bovine meat products; Meat products; Vegetable oils and fats; Dairy products; Processed rice; Sugar; Food products; Beverages and tobacco products; Light Manufacturing; Wood products; Paper products and publishing; Petroleum and coal products; Chemical products; Manufacturing; Electricity; Gas Manufacturing; Transport; Food Services; Services; and Trade. **Regions:** Egypt; AMU^b; ECOWAS^c; ECCAS^d; EAC^e; RCEA^f; RSouthAf^g; SACU^h ex.SA; South Africa; Australia; New Zealand; Rest of Oceania; China; Japan; Korea; RSEA_PACⁱ; Indonesia; Malaysia; RSEA_OPA^j; Taiwan; RSAS^k; India; Canada; USA; Mexico; RCAM^l; Argentina; Brazil; RSAM^m; EU_MidWestⁿ; EU_CentralEast^o; EU_South^p; EU_North^q; EU_Baltic^r; United Kingdom; ROWE^s; RCEU^t; Russian Federation; Ukraine; Former Soviet Union; Turkey; and Middle East. Therefore, the comprehensive nature of GTAP database makes it reliable to be applied in economy-wide global studies (Aguiar et al., 2022).

3.2 The standard GTAP model

^b AMU is the Arab Maghreb Union (Algeria; Morocco; Tunisia; Rest of North Africa)

^c ECOWAS refers to the Economic Community of West African States (Benin; Burkina Faso; Cameroon; Cote d'Ivoire; Ghana; Guinea; Mali; Niger; Nigeria; Senegal; Togo; and Rest of Western Africa)

^d ECCAS is the Economic Community of Central African States (Central African Republic; Chad; Congo; Democratic Republic of the Congo; Equatorial Guinea; Gabon; and South-Central Africa)

^e EAC represents the Eastern African Community (Kenya; Rwanda; United Republic of Tanzania; Uganda; Rest of Eastern Africa)

^f RCEA stands for the Rest of Central and East Africa (Ethiopia; and Sudan)

^g RSouthAf represents the Rest of South Africa (Comoros; Madagascar; Malawi; Mauritius; Mozambique; Zambia; and Zimbabwe)

^h SACU is the Southern African Customs Union (Botswana; Eswatini; Namibia; Rest of SACU)

ⁱ RSEA_PAC denotes the Rest South-East Asia – Pacific (Mongolia; Rest of East Asia; Cambodia; Lao People's Democratic Republic of Viet Nam)

^j RSEA_OPA is the Rest of South East Asia – Oceania Pacific (Brunei Darussalam; Philippines; Singapore; Thailand; Rest of Southeast Asia)

^k RSAS refers to the Rest of South American States (Afghanistan; Bangladesh; Nepal; Pakistan; Sri Lanka; Rest of South Asia)

^l RCAM denotes the Rest of Central America (rest of North America; Costa Rica; Guatemala; Honduras; Nicaragua; Panama; El Salvador; Rest of Central America; Dominican Republic; Haiti; Jamaica; Trinidad and Tobago; Caribbean)

^m RSAM is the Rest of South America (Bolivia; Plurinational State of; Chile; Colombia; Ecuador; Paraguay; Peru; Uruguay; Venezuela; Bolivarian Republic; Rest of South America)

ⁿ EU_MidWest represents the Middle West of European Union (Austria; Belgium; France; Germany; Luxembourg; Netherlands)

^o EU_CentralEast stands for the Central East of European Union (Bulgaria; Croatia; Czechia; Hungary; Poland; Romania; Slovakia; Slovenia)

^p EU_South is the European Union South (Cyprus; Greece; Italy; Malta; Portugal; Spain)

^q EU_North represents the European Union North (Denmark; Finland; Ireland; Sweden)

^r EU_Baltic is the European Union Baltic (Estonia; Latvia; Lithuania)

^s ROWE reflects the Rest of West Europe (Switzerland; Norway; Rest of EFTA)

^t RCEU is the Rest of Central European Union (Albania; Serbia; Rest of Europe)

The GTAP model encompasses a system of equations, which defines the economy, using of economic theory and real-world data to analyse the effects of the policy shock. The model represents an open economy, assuming world prices are externally determined. The strength of the CGE models amongst others is that able reflect a complete view of an economy (multi-country or single country) as interlinked components of all economic agents (households, firms, government and the rest of the world).

Producers aim to maximize profits within the constraints of available production technologies, while consumers seek to maximize utility within a budget constraint. The model is based on perfect competition, meaning that market prices and quantities are not influenced by market power on either the supply or demand side. Producers can sell goods domestically or export them, with the decision influenced by the elasticity of product transformation between these destinations, using a constant elasticity of transformation (CET) function. Export changes are driven by fluctuations in export prices and external shifts in demand, as determined by a downward-sloping curve. Consumers can choose between domestic goods and their imported substitutes, with imperfect substitution between them, as defined by the Armington hypothesis (Aragie et al., 2017). The study will be estimating Ad-Valorem equivalents of NTMs.

4. Policy shocks and simulation

The study adopts the modelling implementation of the AfCFTA concerning the variations in intra-African tariff duties and Non-Tariff Measures (NTMs). The three scenarios are as follows: (i). reducing targeted tariff rates on non-sensitive products by 90% and 50% reduction on NTMs, (ii). tariff rates are reduced by 97% and NTMs reduced by 50%. (iii). Elimination of tariffs and NTMs by 100% (full liberalisation). The initial two shocks are anchored on analysis conducted by Boysen (2024) and Simola et al., (2025), which are compatible with tariff liberalisation approach of AfCFTA captured in **Table 1**. The gradual trade liberalisation scenario assumes that member states are ratifying and implementing the schedule tariff reduction as per category of prioritisation of liberalisation modalities. However, the reality is that the success of AfCFTA relies on offers from various countries. The last scenario assumes that complete liberalisation is realised uniformly by all member states. This represent a hypothetical scenario which assess on how much could be achieved if the intra-Africa can be fully liberalised.

Table 1:

Group	Label	Description	Implementation period	
			LDCs	Non-LDCs
1	Non-sensitive	Reduction tariffs on at least 90% lines	10 years	5 years
2	Sensitive	At least 7% or lesser tariff lines might be declared as sensitive	13 years	10 years
3	Excluded	At least 3% or lesser tariff lines may be exempted from trade liberalisation		

Source: Adapted from Boysen (2024) and Simola et al., 2025

The agriculture and agro-processing commodities are among the prominent traded commodities within the Africa, in which South Africa is amongst the net exporter in the continent. However, the policy shock includes all commodities for the purpose of analysing an economy-wide effects of AfCFTA.

Secondly, the AfCFTA intends to reduce the NTMs across the continent to enhance the intra-Africa trade. This intends to eliminate the NTMs which plays a role in distorting intra-Africa trade. The uncertainty around the NTMs is due inability to measure them directly and there is no evidence regarding the percentages to be targeted in reducing them in Africa. Therefore, the study makes assumptions to reduce them by 50% and 25%, respectively.

5. Expected results and policy recommendations

The trade liberalisation through AfCFTA could potentially lead to different situations, which would be analysed using the CGE model. Firstly, the AfCFTA has a potential open a largest market within the African continent, while reduction of tariffs and NTMs could potentially assist the gross domestic product (GDP) of most African countries to increase. The reduced tariffs and NTMs may result in a rise of intra-Africa trade which will translate in growth in terms of trade, total output, investment, employment and other variables of economic importance. The current would bring value on the policy debates relates boosting intra-Africa trade, employment and economic growth.

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