




## RESEARCH ARTICLE



<https://doi.org/10.17059/ekon.reg.2024-3-18>

UDC 330.5, 339.1,

JEL F14, F15, O1

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## Effects of a Customs Union on Economic Growth: Empirical Evidence from Southern African Customs Union (SACU)<sup>1</sup>

**Abstract.** This study analyses the effects of the Southern African Customs Union (SACU) on the economic growth of its member states based on unbalanced panel datasets. This research was inspired by the ongoing discussions about the development of “free-trade agreements” and the growing anxiety about the US dollar’s stability as a world currency. The latter has recently led to the announcement of the Brazil-Argentina currency union to make bilateral trade easier. As the SACU countries are practically using the South African Rand as a single currency, a growing interest in evaluating the SACU internal trade validity for being the foundation of similar integrative action has started to manifest. The regression results of pooled ordinary least squares (OLS), fixed effects (FE), and random effects (RE) models demonstrate that the economic growth effects of intra-trade (exports, imports) of SACU do not exist. This indicates that further economic integration may not provide positive effects for SACU. However, the most crucial factor to drive the economic growth of SACU turned out to be domestic investment. Attracting foreign direct investment (FDI) also highly contributes to the economic growth of SACU. It is natural and advisable for the member states of SACU to continue the enhancement of investment-conducive environments for domestic and foreign companies. In addition, the long-term fuelling of economic growth with government debt, government spending, and investments points to possible discrepancies in the economic structure of the union, may be connected to internal demand issues. In this sense, it would be reasonable to research the potential of expanding SACU to the countries of the Southern African Development Community (SADC).

**Keywords:** trade integration, regional economic integration, regional economic growth, economies of scale effect, intra-SACU trade, South Africa

**For citation:** Lee, H.-S., Chernikov, S.U., Moseykin, Yu.N., & Barrie, G. (2024). Effects of a Customs Union on Economic Growth: Empirical Evidence from Southern African Customs Union (SACU). *Ekonomika regiona / Economy of regions*, 20(3), 884-898. <https://doi.org/10.17059/ekon.reg.2024-3-18>

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## ИССЛЕДОВАТЕЛЬСКАЯ СТАТЬЯ

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## Влияние членства в таможенном союзе на экономический рост стран: эмпирические данные Южно-Африканского таможенного союза

**Аннотация.** В статье исследуется влияние Южно-Африканского таможенного союза (ЮАТС) на экономический рост государств-членов на основе анализа несбалансированных панельных данных. В настоящее время продолжаются дискуссии о разработке соглашений о свободной торговле, а также растет обеспокоенность по поводу стабильности доллара США как мировой валюты. Последнее привело к созданию валютного союза между Бразилией и Аргентиной для облегчения двусторонней торговли. Поскольку страны ЮАТС фактически используют южноафриканский рэнд в качестве единой валюты, для координации аналогичных интеграционных действий необходимо оценить внутреннюю торговлю в рамках союза. Для построения регрессий были использованы методы объединенных наименьших квадратов, модель с фиксированными эффектами и модель со случайными эффектами. Их анализ показал отсутствие влияния внутренней торговли (экспорта, импорта) на экономический рост в ЮАТС. Это означает, что дальнейшая экономическая интеграция может не принести желаемых положительных результатов. Наиболее важным фактором экономического роста в Южно-Африканском таможенном союзе оказались внутренние инвестиции; значительную роль также играет привлечение прямых иностранных инвестиций. Следовательно, для государств – членов ЮАТС целесообразной является политика улучшения инвестиционных условий для отечественных и иностранных компаний. Использование таких рычагов стимулирования экономического роста, как государственный долг, государственные расходы и инвестиции указывает на возможные структурные диспропорции с экономике союза, что может быть связано с проблемами внутреннего спроса. В этом смысле было бы разумно исследовать потенциал интеграции между Южно-Африканским таможенным союзом и Сообществом развития Юга Африки.

**Ключевые слова:** торговая интеграция, региональная экономическая интеграция, региональный экономический рост, эффект масштаба, торговля внутри ЮАТС, Южная Африка

**Для цитирования:** Ли Х., Черников С. Ю., Мосейкин Ю. Н., Барри Дж. (2024). Влияние членства в таможенном союзе на экономический рост стран: эмпирические данные Южноафриканского таможенного союза. *Экономика региона*, 20(3), 884-898. <https://doi.org/10.17059/ekon.reg.2024-3-18>

### 1. Introduction

The oldest customs union still in existence is the Southern African Customs Union (SACU). The Customs Union Convention between the British Colony of Cape of Good Hope and the Orange Free State Boer Republic in 1889 marks the foundation of the Southern African Customs Union. This relationship was fundamental between the Union of South Africa and the British High Commission Territories (HCTs); namely, Basutoland (Lesotho), Bechuanaland (Botswana), and Swaziland were included in a new agreement that was signed in 1910. Afterwards, South West Africa (Namibia) joined the group in 1915. The main objective of coordinating commerce across regions was to support swift economic development, and the signed agreement remained in force until 1969 (MacCarthy, 1994). It centred on policies that cater to a common external tariff (CET) on all commodities brought into the union from the rest of the world, a pooled system of customs taxes based on the total value

of regional trade and excise duties based on the total production and consumption of excisable goods, totally unrestricted and duty-free internal trade of goods produced within SACU, as well as a revenue-sharing formula (RSF) for allocating the union's accumulated customs and excise tax revenues. With the support of the common external tariffs on non-SACU goods, South Africa started implementing import substitution industrialisation (ISI) strategies as early as 1925. The British High Commission Territories (HCTs) were reduced to producing necessities, while these policies ensured a regional market for South African manufactured goods.

The British High Commission Territories consistently pushed for a reform of the 1910 agreement due to structural problems with administration and decision-making procedures and problems resulting from unequal revenue distribution. After the HCTs attained independence in the early 1960s, negotiations to amend the 1910 Agreement started, eventually

leading to the 1969 Agreement. On December 11, 1969, the 1969 SACU Agreement was signed by the sovereign states of Botswana, Lesotho, Swaziland (BLS) and South Africa, bringing about two significant changes: the addition of excise taxes to the revenue pool and a multiplier to the revenue-sharing formula, increasing yearly BLS revenues by 42 %.

Following Namibia's 1990 independence and South Africa's end to apartheid in 1994, SACU members began new negotiations in November 1994 (Kirk & Stern, 2005). These discussions concluded in a revised SACU agreement in 2002 that addressed the following three petitions by member states. For joint decision-making under Article 3, SACU decided to be governed by a separate Administrative Secretariat based in Namibia's Windhoek. Such independent organisations, as a Customs Union Commission, a Council of Ministers, Liaison Committees, a Tribunal for SACU, and a SACU Tariff Board, etc., were established under Article 7. The goal of these entities is to increase member states' equal involvement. Additionally, the 2002 Agreement protects emerging industries and policy coordination in competitive industries, and unfair trade practices. Customs excises and development components have been added to the RSF, creating a new revenue-sharing formula, indicating the need to adopt measures that strengthen the region's political, economic, social, and cultural integration without endangering the economy of the smaller states.

Previously, some studies have investigated the impact of trade liberalisation on the economic growth of SACU countries. For instance, in a study by Manwa & Wijeweera (2016), it is revealed that the positive effects of trade liberalisation are significantly more noticeable in South Africa compared to other SACU countries. In a follow-up study, Manwa et al. (2019) asserted that there are barely any positive effects of trade liberalisation (proxied by four different variables, namely, (i) tariffs, (ii) real effective exchange rates (REER), (iii) trade ratios, and (iv) adjusted trade ratios) on the economic growth of SACU. In the same way, the effects of trade liberalisation turned out insignificant in the current study of Lesotho (Malefane & Odhiambo, 2021). Contrary to previous literature that explores the impact of trade liberalisation on the economy, our study aims to investigate a specific effect of intra-trade flows on the economic growth of SACU member states. This research was inspired by the ongoing discussions on the development of "free-trade agreements" and the growing anxiety about the

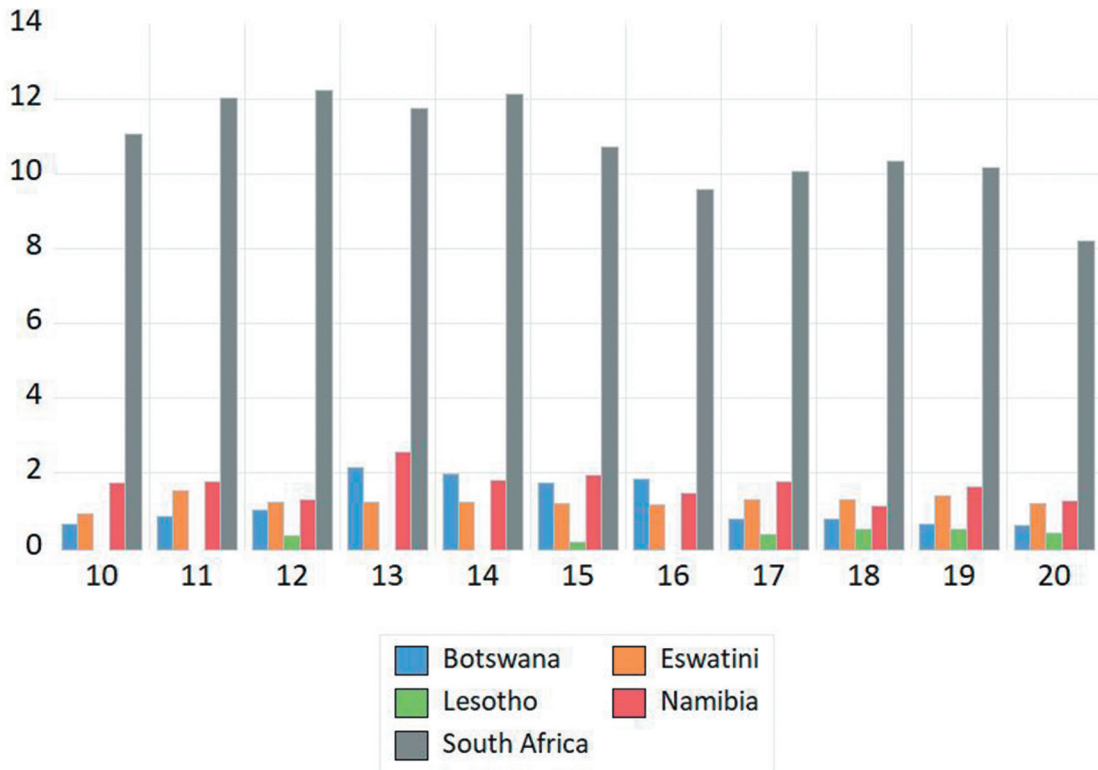
US dollar's stability as the world's currency. The latter has recently led to the announcement of the Brazil-Argentina currency union to make bilateral trade easier. As the SACU countries are practically using South African Rand as a single currency, a growing interest in evaluating the SACU internal trade validity for being the foundation of similar integrative action has started to manifest. Being one of the oldest integrations, SACU has a set of institutions and a council responsible for joint decision making in custom tariffs. Taking into account the export structure of SACU countries, these decisions have a significant impact on all economic decisions of member states — global, regional or national. In this sense, the results of the study can be used to draft further policies for the economic integration of SACU.

The rest of the study is comprised as follows. Section 2 is dedicated to the dynamics of intra-trade volumes of SACU for the period of 2010–2020. Section 3 reviews the previous studies. In Section 4, the model specification and research hypothesis are presented. Section 5 provides the results of the econometric analysis. Section 6 compares our results with the previous studies. Section 7 describes conclusions and policy implications.

## 2. Dynamics of intra-trade volumes of SACU

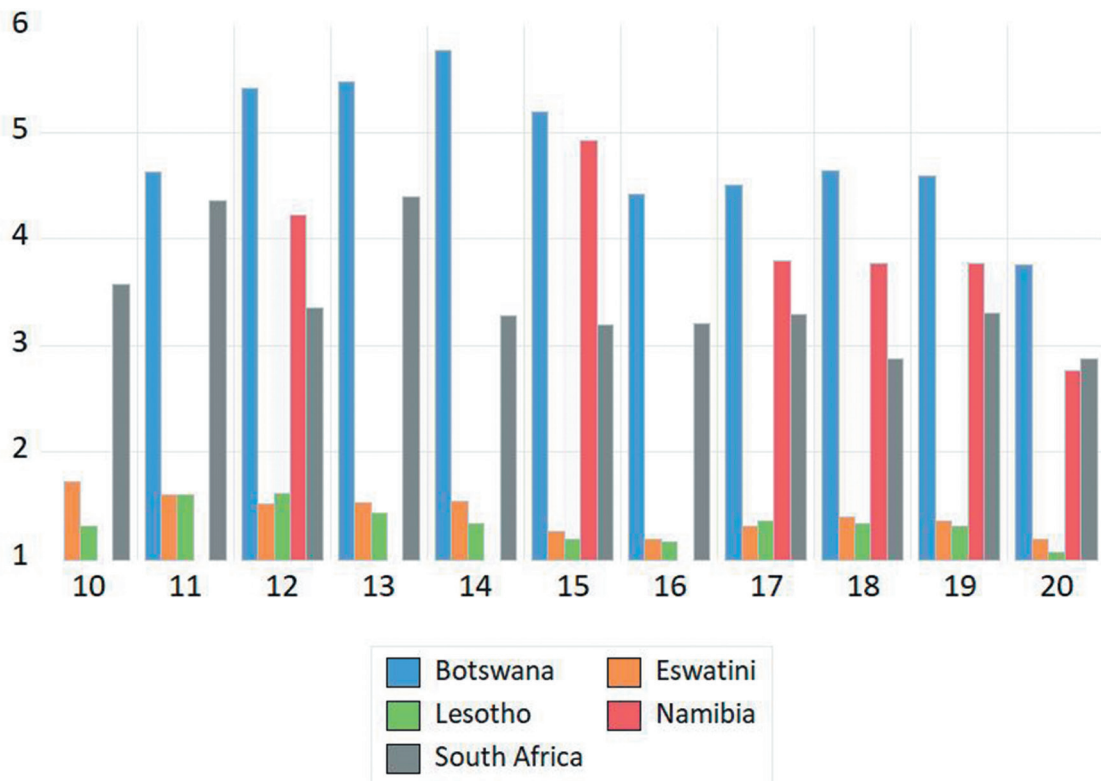
This section is dedicated to reviewing the dynamics of intra-trade volumes of SACU for the period 2010–2020. First, to deal with intra-export volumes (in billion US dollars) of SACU, it is worth noting that South Africa is the country leading the charge. The intra-export volumes of South Africa amounted to between 10–13 billion US dollars. They peaked in 2012, then showed a gradual decrease to less than 10 billion US dollars in 2016, and maintained a similar trend afterwards. On the other hand, for the same period, the intra-export volumes of Lesotho were less than 1 billion US dollars. The intra-export volumes of the other three countries contended for precedence in the period 2010–2020 and continue fluctuating. Additionally, all SACU countries were affected by the COVID-19 pandemic as intra-export volumes contracted in all member states.

In terms of intra-import volumes (in billion US dollars), Botswana is the leading country, although Namibia and South Africa are also comparable. During the study period, intra-import volumes of Botswana amounted from 4 to 6 billion US dollars (excluding the COVID-19 pandemic year). At the same time, the intra-import volumes of Eswatini and Lesotho are rather insignificant: during their entire existence, they have never reached 2



**Fig. 1.** Intra-export volumes (in billion US dollars) of SACU (Source: reproduced from Eviews 12 based on data from IMF<sup>1</sup>)

<sup>1</sup> IMF. (2023). Directions of trade statistics. Retrieved from: <https://data.imf.org/?SK=9D6028D4-F14A-464C-A2F2-59B2CD424B85> (Date of access: 31.01.2023).



**Fig. 2.** Intra-import volumes (in billion US dollars) of SACU (Source: reproduced from Eviews 12 based on data from IMF<sup>1</sup>)

<sup>1</sup> IMF. (2023). Directions of trade statistics. Retrieved from: <https://data.imf.org/?SK=9D6028D4-F14A-464C-A2F2-59B2CD424B85> (Date of access: 31.01.2023).



**Fig. 3.** Dynamics of the intra-trade ratio of SACU (Source: Reproduced from Eviews 12 based on data from IMF<sup>1</sup>)

<sup>1</sup> IMF. (2023). Directions of trade statistics. Retrieved from: <https://data.imf.org/?SK=9D6028D4-F14A-464C-A2F2-59B2CD424B85> (Date of access: 31.01.2023).

billion US dollars. The devastating impact of the COVID-19 pandemic also can be noticed in the intra-import volumes, as they contracted in all the countries in 2020.

Figure 3 depicts the dynamics of the intra-trade ratio compared to national gross domestic products (GDP). It is in Lesotho where the impact of intra-trade of SACU on its economy is the largest: in 2012, its share of intra-trade to GDP was 78.14 %. Its impact on the economy of Eswatini is also impressive: during the study period, it reached between 56 %-65 %. At the same time, its impact on South Africa is rather insignificant: the share of intra-trade to GDP only ranged between 3.2 % and 4.1 %.

These results illustrate the distribution of principal economic roles within SACU. Even a cursory analysis of internal trade patterns shows the dominance of machinery and processed products in South Africa's exports to its union partners, with a rather high dispersion among product groups, while the return trade flows concentrate on raw materials and agricultural products. For example, depending on information source, up to 65 % of Namibia's exports to South Africa is "Gold" and up to 29 % of Botswana's exports consists of "Diamonds". The situation of Eswatini and Lesotho is not much different and even more severe due to the size of their economies.



### 3. Theory

Multiple studies have estimated the impact of economic integration on economic growth. The early theory that studied the effects of a customs union on economic growth was published by Meier (1960). According to this theory, a customs union is doubtful to have a clearly defined positive influence on the West Indies' economic growth. The reason can be the fundamental region's development feature, encompassing the swift export flow growth to other markets and the impact of this export to the domestic economy. Chineye et al. (2020) discovered that regional economic integration has little effect on economic growth in Nigeria. Using the composite regional integration index, Orji et al. (2022) indicated that regional integration (which is measured by the five dimensions of the regional integration index) minimally affects economic growth of Economic Community of West African States (ECOWAS) countries. However, there is a positive correlation between economic growth and regional integration, particularly in the region's trade and financial integration. Ehigiamusoe and Lean (2019b) comparatively investigated the impact of financial development on economic growth in Union Économique et Monétaire Ouest Africaine (UEMOA) and non-UEMOA countries. They believed that, even with all other economic benefits, economic unions do not significantly affect economic growth through financial development in the region.

Other studies revealed the fundamental role of regional integration in growth increase, though with mixed and uncertain conclusions. According to the research by Shah (2021), South Asian Association for Regional Cooperation (SAARC) or South Asian economies have a considerable boost in economic growth due to economic integration. The empirical investigations by Ehigiamusoe and Lean (2019a) on the nexus between economic integration and economic growth in developed and developing countries showed that economic integration positively affects economic growth and its drivers (productivity growth and capital accumulation) but with a trifling impact on the adoption of a single currency.

Using panel data analysis, Bong and Premaratne (2018) discovered that regional integration significantly affects economic growth. One of the important factors influencing the growth is the initial growth rate of GDP per capita and capital stock, and the degree of openness to international trade, even though increasing population and institutional incompetence can significantly impede this growth. Seck et al. (2020) analysed the regional integration and growth spillovers

in Africa and discovered clear evidence of a positive growth spillover over the continent more through trade connections than through physical familiarity. Growth in one country helps other countries' growth, as is the case with Organisation for Economic Co-operation and Development (OECD) members.

The creation of a customs union between Turkey and the European Union (EU) in 1996 accounted for the positive effects of import capacity from the EU on Turkish manufacturing industries which was realised in total output and labour productivity even though with little impact on total factor productivity, which produced mixed results for the variables (Akkoyunlu-Wigley et al., 2006). In their study on the economic effects of economic integration, Karakas et al. (2019) demonstrate that the EU and Shanghai Cooperation Organisation (SCO) nations substantially impact Turkey's economic growth and fluctuation over the short and long terms through an increase in import and export.

Some studies demonstrated the impact of EU integration on its member states. Wooster et al. (2008) showed the significance of both trading systems in growth, but the results highlighted the greater role of extra-regional trade over inter-regional trade in economic growth due to the broad scale of market opportunities available for countries globally. Several authors have studied the significance of economic integration in terms of economic growth. Miron et al. (2010) showed that sustainable development can be achieved through the economic trade equilibrium in the import-export relationships correlating with GDP. According to a study by Chang (2018), Brexit will undoubtedly impact the UK's economy. These effects could be short – or long-term depending on the negotiation process on significant economic dysfunction. However, the mixed indicators on the effect make it difficult to assess the economic consequences on a single scale and show the position of integration within the EU and the UK economies.

Multiple papers are devoted to the economic growth and customs unions of South America. Caceres (2011) discovered that the economic integration of Mercosur plays a vital role in economic growth. This is evident in the process of upscaling, stabilising and protecting regional employment through infrastructural investments programmes and the creation of regional funds to aid these investments when needed. The result further emphasises the need for the unification of the region's currency which will foster employment as well as strengthen the

economic growth on a broader scale while serving as an instrument to alleviate international and domestic recessions by creating a conducive atmosphere for intraregional trade flow in times of crisis. In summary, economic integration should focus on the abolition of poverty and unemployment by putting the appropriate policies to achieve these changes. According to Basnet and Pradhan (2017), their results prove that regional integration is significant for Mercosur member states in both the short and long run due to the common shared variable cycle in real and financial sectors. Using descriptive data analysis, Campos (2016) discovered that international economic diversification has more significance in economic growth than regional integration. Brazil's shift into the international market created a huge opportunity which negatively affected the economic growth of other Mercosur members. In a similar line, according to Doctor (2013), Mercosur's deepening is

essential for economic growth. However, the contrasting strategies and focus among member states in the region greatly affect the sustainable growth process. Therefore, it was proposed that there should be a significant rearrangement of the existing policies for national and regional equilibrium; a customs union with a unified trade system that will foster a harmonising benefit for member state. As evidenced by this analysis, independent economy and sovereignty are fundamental to sustainable regional integration.

The summary of the literature review is presented in Table 1. Evaluations of previous studies led us to conclude that regional integration does not always result in the economic growth of member states in both developed and developing nations. Thereby, it seems necessary that the economic union should use a comprehensive policy approach in their integration to encourage sustainable growth. Our study is scientifically and practically valuable,

Table 1

The summary of the effects of a customs union on economic growth

Study	Methodology	Country/Year	Findings
Meier (1960)	Production possibility curve	West Indies (N/A)	No clearly defined positive impact on West Indies' economic growth
Akkoyunlu-Wigley et al. (2006)	Ordinary least squares (OLS)	Turkey (1994-2001)	A positive effect of the customs union with the EU on the Turkish economy
Wooster et al. (2008)	Granger causality test, fixed effects (FE)	EU (1980-2003)	Extra-regional trade plays a greater role in economic growth due to the broad scale of market opportunities available for countries globally
Miron et al. (2010)	Dynamic forecasting, after vector auto-regression (VAR), logistic regression	Romania (2000-2007, 2008-2010)	Sustainable development can be achieved through the economic trade equilibrium in the import-export relationships correlating with GDP
Caceres (2011)	(VAR)	MERCOSUR (1991- 2008)	Economic integration enhances and strengthens economic growth by upscaling, stabilising and protecting regional employment and unifying currency to aid the alleviation of both international and domestic recession
Doctor (2013)	Comparative descriptive data analysis	MERCOSUR (N/A)	Mercosur's deepening is essential for economic growth which can be achieved through a significant redistribution of existing policies with balanced and unified economy
Campos (2016)	Descriptive data analysis	MERCOSUR (1990s ~ 2010s)	Economic diversification has a significant role in economic growth, independent economy and sovereignty are fundamental to sustainable regional integration
Basnet & Pradhan (2017)	Common cycle analysis	MERCOSUR (2001-2012)	A positive explanation for strong economic integration in MERCOSUR countries due to the common shared variable cycle in real and financial sectors

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Study	Methodology	Country/Year	Findings
Bong & Premaratne (2018)	Generalised method of moments (GMM)	Southeast Asia (1970–2013)	A significant impact of regional integration among South Asian countries on its economic growth
Chang (2018)	Descriptive data analysis	UK (1952–2020)	Irrespective of the unpredictable results of the Brexit negotiations.
Ehigiamusoe & Lean (2019a)	Survey of the empirical literature	Developed and developing countries (N/A)	A positive effect on economic growth and its drivers
Ehigiamusoe & Lean (2019b)	Random effects (RE), fixed effects (FE), mean group/pooled mean group (MG/PMG), instrumental variable (IV) regression	UEMOA (1980–2014)	Economic unions do not indirectly affect economic growth at a significant level through regional financial development
Karakaş et al. (2019)	Descriptive data analysis	Turkey (2000–2017)	Trading both with the EU and SCO countries has a substantial impact on Turkey's economic growth through an increase in imports and export
Chineye et al. (2020)	Autoregressive distributed lag (ARDL)	Nigeria (2001–2019)	Diminutive effect of economic integration with the WAMZ (West African Monetary Zone) member countries on economic growth in Nigeria
Seck et al. (2020).	Spatial dynamic panel data analysis	Africa (AfCFTA) (a 2-year interval over the period 2000–2016)	Positive growth spillover enhances economic growth through trade
Orji et al. (2022)	IV regression based on the dynamic panel data method, within the framework of system-GMM	ECOWAS member countries (2010–2020)	A minimal effect on ECOWAS countries' economic growth, even though there is a positive correlation between economic growth and regional integration, particularly in the region's trade and financial integration

Source: composed by the authors.

since it estimates the impact of the economic integration of SACU on their economic growth, which had been rarely explored, previously. The research results can be used to induce development policies of governments of SACU member states while providing directions of the further economic integration of SACU.

#### 4. Model specification and research hypothesis

For the regression analysis, we composed unbalanced panels due to missing datasets in the middle of the study period (trade and import during 2000–2020, export during 2010–2020). To draw a model in our study, we referred to Bostan et al. (2023). Economic growth is under the effects of internal (labour input, domestic investment) and external (namely, trade openness and foreign direct investment (FDI)) factors. Here, our study modified trade openness to the intra-trade openness of SACU. The model specification is as follows:

$$GRW_{GDPit} = \beta_0 + \beta_1 Trade_{it} + \beta_2 FDI_{it} + \beta_3 Labour_{it} + \beta_4 GRW_{DIit} + \varepsilon_{it}$$

$$GRW_{GDPit} = \beta_0 + \beta_1 Exports_{it} + \beta_2 FDI_{it} + \beta_3 Labour_{it} + \beta_4 GRW_{DIit} + \varepsilon_{it}$$

$$GRW_{GDPit} = \beta_0 + \beta_1 Imports_{it} + \beta_2 FDI_{it} + \beta_3 Labour_{it} + \beta_4 GRW_{DIit} + \varepsilon_{it}$$

where  $GRW_{GDPit}$  is the growth rate of GDP per capita (constant, 2015) of country  $i$  in year  $t$ .  $Trade_{it}$  is the ratio of intra-trade volumes of SACU of country  $i$ 's GDP in year  $t$ ;  $Exports_{it}$  is the ratio of intra-export volumes of SACU to the country  $i$ 's GDP in year  $t$ ;  $Imports_{it}$  is the ratio of intra-import volumes of SACU to the country  $i$ 's GDP in year  $t$ .  $FDI_{it}$  is the ratio of FDI net inflows to the country  $i$ 's GDP in year  $t$  and a control variable.  $Labour_{it}$  is the rate



## Research hypothesis

Variables	Expected coefficient Sign
Trade	Vague
Exports	Positive
Imports	Vague
FDI	Positive
Labour	Positive
GRW_DI	Positive

Source: composed by the authors.

of labour force participation compared to the total population ages 15+.  $GRW_{Dit}$  is the growth rate of gross capital formation (constant, 2015), which is equal to domestic investment.<sup>1</sup> We obtained datasets of trade from IMF's Directions of trade statistics<sup>2</sup>, while that of other variables were taken from the World Bank's World Development Indicators<sup>3</sup>. For the robust estimations, we will test the effects of intra-trade, intra-export, and intra-import effects with and without control variables.

Table 2 represents the research hypothesis. We can expect a positive coefficient of Exports and FDI. When calculating gross domestic product, exports and FDI are added. Especially, FDI not only must have direct growth effects like exports, but indirect growth effects on the host country's domestic economy through technology and knowledge spillovers (Khachoo & Sharma, 2016; Vahter, 2011; Hoang et al., 2021). In reality, there are a plethora of studies proving the export-led and FDI-led growth effects (Kollie, 2020; Su et al., 2019; Malefane, 2021; Lee & Yu, 2022; Kim et al., 2022). On the other hand, the effects of trade and imports are expected to be rather vague. Large volumes of imports exceeding exports can cause trade deficits in a nation. However, the imported goods are assets for the production of the domestic economy. Sustaining a high level of imports is possible when the domestic market is growing based on firm demand. In this sense, we expect that the signs of coefficients of Trade and Imports are uncertain. Increasing labour and domestic investment is one of the ways

to expand the economy. Thereby, the expected sign of coefficients of both internal factors is positive.

## 5. Results

The regressing results of the presented equations (1)–(3) are shown in Tables 3–5. The coefficient of Trade is generally insignificant in a model with and without control variables (excluding the FE model without control variables). This indicates that the effects of the intra-trade of SACU on its economic growth do not exist. When the key variable is modified to Exports, the results remain the same. The impact of Imports is almost the same, although its statistically positive significance appears in FE models.

On the other hand, it is worth noting that it is not intra-trade (exports or imports) of SACU, but FDI that drives its economic growth in terms of an external aspect. In multiple models, FDI is positively correlated with GRW\_GDP with statistical significance. The positive impacts of FDI appear in models with Trade under OLS, FE, and RE estimators. Especially, its positive impacts exist with Exports under OLS, FE, and RE estimators without variables of internal effects. The positive effects become weak in models with Imports, but still, their significance appears in RE estimators.

In addition, this study further verified the effects of internal factors. GRW\_DI consistently shows a positive coefficient in all kinds of models. In the Exports models, the sign of FDI turns from significant to insignificant as the Grw\_DI variable is added. This indicates that domestic investment is the prior factor to drive economic growth in SACU countries. The coefficient of Labour is rather unstable: its sign goes from positive to negative depending on the estimator.

## 6. Discussion

It is revealed in our study that economic integration (proxied by intra-, trade, exports, and imports volumes) of SACU does not lead to any significant economic growth. This result is consistent

<sup>1</sup> To calculate the growth rate of direct investment, we converted the nominal value of gross capital formation (hear-after DI) to real value of it. The formula is as follows: Real DI = (Nominal DI/GDP deflator) \* 100

<sup>2</sup> IMF. (2023). Directions of trade statistics. Retrieved from: <https://data.imf.org/?SK=9D6028D4-F14A-464C-A2F2-59B2CD424B85> (Date of access: 31.01.2023).

<sup>3</sup> The World Bank. (2023). World Development Indicators. Retrieved from: <https://databank.worldbank.org/source/world-development-indicators> (Date of access: 31.01.2023)

Table 3

## Regression results from 1

	OLS			FE			RE		
	Trade 1	Trade 2	Trade 3	Trade 4	Trade 5	Trade 6	Trade 7	Trade 8	Trade 9
Constant	-0.005720 (0.012013)	-0.010617 (0.012146)	0.119861* (0.070208)	-0.070052 (0.042173)	-0.068836 (0.039806)	-0.436982 (0.316019)	-0.006817 (0.013373)	-0.010617 (0.011390)	0.119861* (0.066781)
Trade	0.017095 (0.025444)	0.008581 (0.025472)	0.015708 (0.025039)	0.175770* (0.102962)	0.143237 (0.098132)	0.145004 (0.095095)	0.018317 (0.028029)	0.008581 (0.023886)	0.015708 (0.023817)
FDI		0.505569 (0.307083)	0.565923* (0.301449)		0.725093** (0.304763)	0.619840** (0.296591)		0.505569* (0.287968)	0.565923* (0.286735)
Labour			-0.238008* (0.128871)			0.651332 (0.561961)			-0.238008* (0.122581)
GRW_DI			0.082403* (0.040948)			0.072853* (0.040301)			0.082403** (0.038950)
Country	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Year	No	No	No	No	No	No	No	No	No
Obs.	44	44	44	44	44	44	44	44	44

Note: \*\*\*, \*\*, \* =P-value significant at 1 %, 5 %, 10 %; Standard errors in parentheses.

Source: own calculations.

Table 4

## Regression results from 2

	OLS			FE			RE		
	Exports 1	Exports 2	Exports 3	Exports 4	Exports 5	Exports 6	Exports 7	Exports 8	Exports 9
Constant	0.005359 (0.008532)	-0.004775 (0.009818)	0.132359* (0.070318)	0.023397 (0.016797)	0.012597 (0.017211)	0.131659 (0.180248)	0.005359 (0.008511)	-0.004207 (0.010989)	0.132359* (0.071203)
Exports	0.038524 (0.054284)	0.044079 (0.053337)	0.000560 (0.054909)	-0.101187 (0.124554)	-0.107589 (0.121751)	-0.103160 (0.121078)	0.038524 (0.054152)	0.031014 (0.061280)	0.000560 (0.055600)
FDI		0.344292* (0.174253)	0.292660 (0.177126)		0.425051** (0.203712)	0.258201 (0.212500)		0.363231** (0.181596)	0.292660 (0.179355)
Labour			-0.233600* (0.120237)			-0.206987 (0.320577)			-0.233600* (0.121751)
GRW_DI			0.070352** (0.030072)			0.069691** (0.031013)			0.070352** (0.030450)
Country	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Year	No	No	No	No	No	No	No	No	No
Obs.	77	77	77	77	77	77	77	77	77

Note: \*\*\*, \*\*, \* =P-value significant at 1 %, 5 %, 10 %; Standard errors in parentheses.

Source: own calculations.

Table 5

## Regression results from 3

	OLS			FE			RE		
	Imports 1	Imports 2	Imports 3	Imports 4	Imports 5	Imports 6	Imports 7	Imports 8	Imports 9
Constant	0.007504 (0.007870)	0.002434 (0.008348)	0.051315 (0.067533)	-0.085008*** (0.031537)	-0.079568** (0.031233)	-0.556935*** (0.200803)	0.006907 (0.007917)	0.002434 (0.007791)	0.051315 (0.060002)
Imports	-0.000529 (0.024159)	-0.010593 (0.024586)	0.003338 (0.029991)	0.365117*** (0.123299)	0.314056** (0.125384)	0.268732** (0.116781)	0.001054 (0.023987)	-0.010593 (0.022945)	0.003338 (0.026646)
FDI		0.436662 (0.266077)	0.409931 (0.259578)		0.428816 (0.262925)	0.355043 (0.242006)		0.436662* (0.248319)	0.409931* (0.230632)
Labour			-0.092521 (0.126470)			0.853977** (0.356787)			-0.092521 (0.112367)
GRW_DI			0.091179** (0.035827)			0.067175** (0.032930)			0.091179*** (0.031832)
Country	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Year	No	No	No	No	No	No	No	No	No
Obs.	59	59	59	59	59	59	59	59	59

Note: \*\*\*, \*\*, \* =P-value significant at 1 %, 5 %, 10 %; Standard errors in parentheses.

Source: own calculations.

with that of studies, like Meier (1960), Ehigiamusoe & Lean (2019a, 2019b), etc., while contradicting the research performed by Bong & Premaratne (2018), Orji et al. (2022), etc. From the literature review, it is confirmed that regional integration could have different impacts on the economy depending on various factors like the economic status of member states, types of economic integration, the level of financial development, and so forth.

Despite having a notable processing industry in South Africa, all SACU countries' economies base their development mostly on natural resources, agriculture, and mining, while the intra-trade of industrial products generally originates in South Africa and spreads to local integration members. South Africa, being the obvious economic leader of the Union, also gains most of its governmental trade income from minerals and agriculture products (Figure 4). It can be argued that the general share of intra-SACU trade is too small (Figure 4) to have a significant impact on joint GDP. However, the main trade goods of the countries in question are relatively low-margin production dependent on global market prices, and the overall trade balance constitutes only a small portion of the country GDP. With this in mind, it is increasingly evident that further liberalisation of intra-trade would have little effect on the participants' economic growth.

The reasons behind the low impact of intra-trade on GDP despite a large manufacturing product share can be explained from another standpoint. It is worth noting from our analysis that it is not internal trade within the current economic integration, but rather the "domestic and foreign investments" turned out to be the critical factors driving the economic development of SACU member states.

The reliance of South Africa's economic growth on both domestic and foreign investments can potentially indicate the lack of internal development drivers, impacting the intra-SACU trade. Salmon (2021) points out that the growing government debt generally has a downward effect on the economic growth, and similar effects of this pattern can be seen in Figure 5 below. In this case, domestic investments are contributing to the same issue in the country's finance as the government debt. The latter has been steadily growing in the SACU-leading economy in the discussed period. As the governmental spending in the union has been on the rise in South Africa, Namibia, and Botswana, this combined with a rather low GDP growth can be pointing to a serious imbalance in the SACU economy. Investments and government debt expansion together with relatively low GDP

growth rates can be pointing to the significant lack of internal consumer and governmental demand for the existing industrial production and associated imports. In turn, such an imbalance could lead to an economic recession in SACU countries upon a prolonged drop in global prices for their export products. However, one of the ways to reduce these risks would be the expansion of SACU to the countries of the Southern African Development Community (SADC), potentially allowing the expansion of internal demand for the South African processing industry. Being much easier said than done, this issue would certainly constitute a topic for further research.

## 7. Concluding remarks

This study analysed the effects of the Southern African Customs Union (SACU) on the economic growth of its member states based on unbalanced panel datasets. Our study aimed to investigate a specific effect of intra-trade flows on the economic growth of SACU member states to draw further policies for the economic integration of SACU.

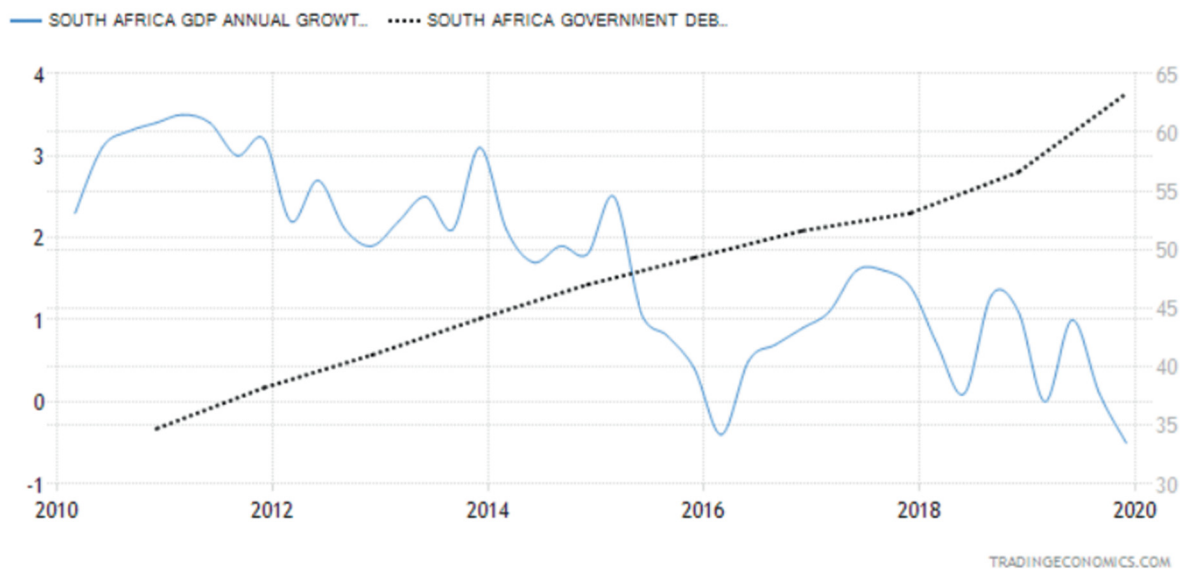
First, the results of pooled OLS, FE, and RE models demonstrate that the economic growth effects of intra-trade (exports, imports) of SACU are insignificant. This indicates that further economic integration in its present configuration may not provide positive effects for SACU if the current policy is sustained.

On the other hand, it is worth noting that the most crucial factor to drive the economic growth of SACU was domestic investment. Attracting foreign direct investment (FDI) also highly contributes to the economic growth of member-states. This naturally indicates that the economic development of SACU member states relies not on further trade liberalisation and expansion, but on active internal and external investments.

In this sense, data-wise advice for SACU countries would be to continue the internal governmental investments and proceed with enhancement of investment-conducive environments for foreign companies. The government should contrive laws and regulations for foreign investments and official development assistance (ODA) to be fully redistributed through the various regions and industries of the nation. This, however, is already the official economic strategy of South Africa, which suggests attracting more investment and creating jobs as the main drivers of growth. However, our research through regression analyses shows that while domestic investment is the most crucial driving factor to enhance the economy, the accompanying growth of government debt makes this policy rather questionable.







**Fig. 5.** Dynamics of “Government Debt to GDP” and “GDP growth rate” of South Africa for the period 2010–2020 (Source: Tradingeconomics<sup>1</sup>)

<sup>1</sup> Tradingeconomics. (2023). Indicators. Retrieved from: <https://tradingeconomics.com/> (Date of access: 31.03.2023)

The absence of positive growth effects from the economic integration of SACU could be partially attributed to a weak national economic base of SACU member states excluding South Africa. Currently, the economic gap between South Africa and other member states is too large to create a mutually supplementing economic synergy. Also, the share of intra-trade is not extremely large compared to total trade of member states. However, the lack of further manufacturing trade development between the leader of the union (South Africa) and member states may be connected to internal demand problems.

All SACU states pinpoint the same obstacles hindering the development at present: unemployment, inequality, poverty, as well as the lack of necessary infrastructure, including for faster industrial development. However, the long-term fuelling of mediocre economic growth with government debt, government spending, and investments points to possible discrepancies in the economic structure of the union. Such problems could explain the slow internal demand deterioration, that also blocks

intra-trade development and is statistically compensated with government spending and debt.

It would be reasonable to delve into the potential expansion of SACU towards the countries of SADC as a means of expanding the overall internal aggregate demand for the intra-trade activities. This could lead to the deepening of the domestic and regional market by increasing employment, increasing income, and other measures that can contribute to inequality, as well as expanding the mutual sales markets of industrial products in the South African region.

On the other hand, this study holds some limitations. In general, it is difficult to have abundant datasets for African countries. For this reason, our model is based on the limited datasets, which hamper the ability to build a strong econometric model, despite our robustness checks. Thereby, follow-up studies should be carried out based on expanded datasets once more data is accumulated for African countries. It is also recommended to draw a direct effect of financial integration of SACU.

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### Conflict of interests

The authors declare no conflicts of interest.

### Конфликт интересов

Авторы заявляют об отсутствии конфликта интересов.

Дата поступления рукописи: 30.03.2023.

Прошла рецензирование: 21.08.2023.

Принято решение о публикации: 20.06.2024.

Received: 30 Mar 2023.

Reviewed: 21 Aug 2023.

Accepted: 20 Jun 2024.