



Does trade liberalization promote investment in Sub-Saharan Africa? Evidence from selected free trade areas

BUSANI MOYO*

Abstract:

This study investigates the impact of trade liberalisation on foreign and domestic investment in selected African free trade areas. Using 29 countries that are members of the three regional economic communities, namely, the East African Community, the Common Market for East and Southern Africa, Southern African Development Community, and data for the period 2000 to 2019, results from various panel models show that trade liberalisation indicators used have heterogenous effects on investment in these regional economic communities. This is partly explained inter-alia by, differences in the ease of doing business environment, variances in the levels of economic growth, and lack of ratification and domestication of some regional investment agreements. Countries must reduce non-tariff barriers if they are to boost investment.

University of South Africa, South Africa
email: moyob@unisa.ac.za

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Africa is home to eight regional economic communities (RECs) that are officially recognized by the African Union. Of these RECs, five have achieved at least a free trade area (FTA) status, with some having graduated to a customs union (CU).¹ The Common Market for East and Southern Africa (COMESA) achieved FTA status in 2000 and launched a customs union that is still non-operational in 2009, whilst the Economic Community of West African States (ECOWAS) established its FTA in 1990 but has, however, failed to achieve the planned customs union status that was to be attained in 2000. The East African Community (EAC) had its customs union

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¹ The five RECs (ECCAS, COMESA, EAC, SADC and ECOWAS) are operating as FTAs. The EAC is the only one with an active customs union, launched in 2005, whilst COMESA's customs union, though launched in 2009, is not yet operational. RECs are regional groupings of states that come together to promote economic and political integration. An FTA is a REC that agrees to eliminate tariffs and non-tariff barriers on goods and services traded amongst member countries. A customs union is an FTA where countries, after agreeing to eliminate tariffs and non-tariff barriers, agree on the common external tariffs to be levied or imposed on non-member countries to minimize incidences of trade diversion.



operational in 2005, whilst the Southern African Development Community (SADC) FTA status was achieved in 2012 (ECOWAS, 2024; COMESA, 2024; SADC, 2024; and EAC, 2024).

The history of regional integration in Africa can be traced back to 1980 through the Lagos Plan, which led to the signing of the Abuja Treaty in 1991 and its subsequent ratification in 1994. The vision for the treaty was for the RECs to serve as building blocks of the continent-wide African Economic Community (AEC) and for the blocs to fall away once the AEC was fully established. Table 1 provides a list of the main RECs in Africa, their year of formation, and membership size. The oldest REC is ECOWAS, formed in 1975, followed by the Southern African Development Coordination Conference, established in 1980 but transformed into the Southern Africa Development Community in 1992. The Preferential Trade Area, established in 1982, was transformed into COMESA in 1994. The convoy approach (where there are no formalized criteria for entry and post-admission tools are used to solicit cooperation) allows African countries to join and exit from any preferred REC (after approval or informing current member countries), and there are no tight restrictions to entry as is the case with the European Union Club model. This freedom of association has resulted in the problem of multiple memberships, with countries like the Democratic Republic of Congo and Somalia belonging to four of the eight RECs.² Of the 54 African countries, only 15 belong to one REC. However, this spaghetti-bowl effect is being addressed through the formation of the African Continental Free Trade Area (AfCFTA).

Table 1 – African regional economic communities and level of integration

REC name and (year of formation)	Acronym	No. of countries	FTA status	Customs union
Arab Maghreb Union (1989)	AMU	5	No	No
Common Market for East and Southern Africa (1994)	COMESA	21	Yes, in 2000	Yes, in 2009
Community of Sahel-Saharan States (1998)	CENSAD	25	No	No
East African Community (2000)	EAC	8	Yes, in 2005	Yes, in 2005
Economic Community of West African States (1975)	ECOWAS	12	Yes, in 1990	No
Economic Community of Central African States (1983)	ECCAS	11	Yes, in 2004	No
Intergovernmental Authority on Development (1996)	IGAD	8	No	No
Southern African Development Community (1992)	SADC	16	Yes, in 2012	No

Source: African Union and REC websites, 2025.

The attainment of FTA and CU status was not only to liberalise trade and increase intra-trade flows but was part of the grand integration strategy mooted by African leaders in 1980 through the Lagos Plan in response to the 1979 Monrovia Declaration (African Union, 2024). The ratification of the Abuja Treaty in 1994 was inter-alia to promote economic integration, self-sufficiency and endogenous development, and the vision for the treaty was for these RECs to serve

² A list of African countries and their REC membership is provided in the appendix (table A8).

as building blocks (through a gradual process of coordination, harmonisation, and progressive integration) of the continent-wide AEC and for the blocs to fall away once the AEC was fully established (African Union, 1991). Formation of the AEC was to be achieved over a period of 34 years through six stages starting from 1999 until 2028. The signing and ratification of the AfCFTA was part of stage four and thus kickstarted the establishment of the AEC.

The inherent aspect of all the FTAs, including the AfCFTA, is to liberalise trade by removing tariff and non-tariff barriers and hence stimulate intra-exports. Liberalisation of trade is also expected to foster domestic and foreign investment and this is stated in Article 3 of the AfCFTA agreement. By reducing trade barriers, thereby facilitating easy movement of goods and services across national boundaries, FTAs increase market size and reduce the cost of importing raw materials as well as increase the competitiveness of exports, creating an environment attractive to investors. Increased competition improves efficiency by forcing firms to invest in innovative and technologically advanced production techniques. Investment promotion is an important part of the AfCFTA and that is why the signing of the agreement was followed by the development of the 2023 AfCFTA Protocol on Investment. The SADC FTA was initiated in 2008 to liberalize trade and improve the investment climate for domestic, cross-border, and foreign investors in addition to enhancing industrialisation (SADC, 2024). For this purpose, the SADC Protocol on Finance and Investment was signed and ratified in 2006. Enhancing cross-border investment is integral to the establishment of FTAs such as those of COMESA, EAC, and ECOWAS. The COMESA Common Investment Agreement (CCIA) was adopted in 2007 by heads of state to enhance the business environment in the region and attract investments, and it is currently being revised to ensure adoption and domestication by member countries (COMESA, 2024). Investment and industrial development in the EAC are outlined in the 2000 EAC Treaty (Chapter 12, Articles 79 and 80); and investment in ECOWAS is governed by the ECOWAS Common Investment Code adopted in 2018, whilst the policy was adopted in 2009 (EAC, 2024; ECOWAS, 2024). These investment strategies were adopted during the tariff phase-down period (in the case of SADC and EAC), whilst others were implemented after achieving FTA status (in the case of COMESA and ECOWAS), and one wonders whether, after more than 15 years, significant investment benefits have been realised by these RECs. Investment promotion is an integral part of realising Africa's endogenous development and self-sufficiency goals, as espoused in the Abuja Treaty of 1991. Promoting local and foreign investment is good for growth, as the latter brings in new capital stock, more advanced production practices, managerial expertise, and innovative skills (Mello, 1999).

Given the importance of investment promotion and its linkage with trade liberalisation (Sachs and Warner, 1995; Collier and Gunning, 1996; Schneider et al., 2000; Martens, 2008; Kandilov et al., 2017; Pierce and Schott, 2018), this study investigates how some selected FTAs have encouraged local and cross-border investment. Is trade liberalisation a necessary and sufficient condition for investment promotion, and which aspects matter more between tariffs and non-tariff removals? These questions are very important in that they have implications for the success of the AfCFTA investment promotion protocol and the realisation of the Lagos Plan goals. Understanding the factors that have a positive or negative effect on investment in these FTAs is important for the successful implementation of the AfCFTA agreement. Kher et al. (2024) from the World Bank argue that the AfCFTA offers a promising opportunity to revive stagnant investment and development. They argue that, if fully implemented, the AfCFTA could boost intra-Africa foreign direct investment (FDI) by 68% and external investment by 122%. World Development Indicators (WDI) (World Bank, 2024) statistics on investment inflows in these three RECS show that FDI as a percentage of gross domestic product (GDP) in SADC averaged 4.1% for the period from 2012 to 2023 compared to 3.8% for the period from 1990 to 2011, whilst the EAC FDI share

of 2.8% for the period from 2006 to 2023 was also higher than for the period from 1990 to 2005, which stood at 0.9%. For COMESA, the FDI averaged 3.3% for the period from 2000 to 2023, compared to 1.5% for the period from 1990 to 2000. The domestic investment pattern is the same, with the EAC average of 18% post-CU-formation higher than the pre-period value of 14%, whilst SADC recorded an average of 16% for the period from 2012 to 2023, which was lower than the 22% recorded for the period from 1990 to 2011. COMESA's average of 14.7% post-FTA formation was also lower than the 18% recorded for the period prior to trade liberalisation from 1990 to 2000. The graphical relationship between these investment flows and trade liberalisation is shown in figures 1, 2 and 3, illustrating mixed association. The question we are asking is: does this profile suggest that these FTAs had a significant effect on FDI and mild effects on domestic investment?

Trade liberalisation is theoretically expected to promote investment, but economic, political, and social heterogeneity in these RECs may affect the impact. For the period from 2000 to 2019, SADC's and COMESA's GDP annual growth rate was, on average, 4% compared to 6% for the EAC. The quality of infrastructure proxied by the percentage of the population with access to electricity shows that COMESA has better access, at 71% compared to SADC and the EAC at 66% and 46%, respectively. The ease of doing business environment is better in the EAC and SADC regions compared to the COMESA region (World Bank, 2025; *Doing Business*, 2019). Governance indicators calculated by the World Bank (2025), show that SADC performs better when it comes to all indicators, including the control of corruption and political stability, whilst those for the EAC are the worst. Given these differences, it is difficult to *prima facie* predict the effect of trade liberalisation on these RECs. This therefore becomes an empirical problem.

Thus, given the widespread adoption of trade liberalization policies in developing countries, including Africa, there remains a need to empirically evaluate their impact on investment. While some studies highlight positive effects of trade liberalization on economic growth and FDI inflows (Liu et al., 2019; Zhao et al., 2024), others underscore the challenges posed by increased competition and trade exposure, particularly for small and medium-sized enterprises (SMEs) (Dollar and Kraay, 2003; Rodrik, 2006).

We analysed the effect of trade liberalisation on investment by first creating FTA dummies where a value of one captures a country that joined the FTA and zero otherwise. These were complemented by trade liberalisation proxies obtained from the Fraser Institute and, given the fact that our data was made up of 20 years (2000-2019) and 29 countries, we ran static panel models. Results from these models show that the EAC FTA had more beneficial effects on FDI and domestic investment than the SADC and COMESA FTAs. Trade liberalisation proxies, such as freedom from the black-market exchange rate, regulatory trade barriers, and tariffs, and the overall freedom to trade internationally, have significant effects on both domestic and cross-border investment flows.

This study is organised as follows: section 1 covers both theoretical and empirical literature review, whilst the methodology is covered in section 2. Results presentation and analysis are in section 3, and conclusions and recommendations covered in section 4.

1. Literature review

Trade liberalization, loosely defined as a move towards freer trade through the reduction of tariff and other barriers, is generally perceived as the major driving force behind improved allocation of resources and consequent gains in productive efficiency and economic growth. Trade

liberalisation, often realised through the establishment of bilateral and multilateral free trade arrangements, has not only facilitated the inflow of FDI but has also increased competition between domestic and foreign companies and accelerated the integration of countries into the global economy (Tian and Fang, 2014; Müller and Seabra, 2019). One of the often-emphasized benefits of international trade is that it stimulates investment in new technologies and thereby enhances productivity and promotes economic growth (Keller, 2004). Thus, by reducing the relative price of imported capital goods, lower capital goods tariffs boost investment in foreign equipment (Bortoluzzo et al., 2024). Similarly, a reduction in the intermediate-input tariffs leads to an increase in investment, since lower input prices raise the marginal profitability of capital used in production (Winters and Yusuf, 2007). According to Reed et al. (2016), if FDI is primarily motivated to take advantage of differences in factor costs and is generally vertical in nature, participation in a trade-liberalised environment would likely increase outbound FDI. Conversely, if FDI is horizontal and motivated by “tariff-jumping”, then participation would have negative effects on FDI. If a multinational enterprise (MNE) duplicates its production facility in foreign markets through horizontal FDI, then it can save not only tariffs but also the other trade-related variable costs such as transportation, insurance, and storage. For firms from countries that are members of an FTA, when trade costs decrease through FTAs, a firm is more likely to export rather than to make horizontal FDI because there is a greater benefit from economies of scale than from the tariff-jumping strategy. Oberhofer and Pfaffermayr (2012) find that large and remote markets are served via horizontal FDI while small and nearby markets tend to be served by exports, suggesting that FDI from FTA member countries close to each other should be low. However, in the same vein, when trade costs such as tariffs decrease through FTAs, the MNE is likely to perform more vertical FDI due to lower costs to import final goods and to export intermediate goods (Bae and Jang, 2013).

Increased competition through trade liberalisation improves efficiency by forcing firms to invest in innovative and technologically advanced production techniques whilst improved outflow and inflow of goods and services across national borders boost market size, thus attracting market-seeking foreign investments. Removing trade barriers can also attract higher levels of FDI by creating a more transparent and predictable trade environment (Kee et al., 2006). According to Bloom et al. (2007), Autor et al. (2016) and Handley and Limão (2017), trade agreements assure manufacturers that trade tariffs between countries will remain stable for a period, thus eliminating some of the uncertainty in international trade that favours firm investments. Additionally, the removal of non-tariff barriers can facilitate the integration of domestic firms into global value chains, enabling them to access new markets and technologies and enhancing their competitiveness (Lall, 2000). On the other hand, lower output tariffs expose domestic firms to heightened foreign competition and erode the marginal profitability of capital, which leads to lower investment in foreign capital goods. Kueng et al. (2016) also argue that trade liberalization can lead manufacturers to reduce their costs by outsourcing part of their production chain, thus reducing investments. According to Pierce and Schott (2018), trade liberalization through increased competition can negatively affect established firms and investment, causing them to close or forcing them to make changes in production, industry migration, etc. However, as much as it is possible for intense competition to result in de-investment as inefficient firms exit the market, remaining efficient firms can increase capacity by investing more and self-selecting themselves into the exporting market (Melitz, 2003). This is probably why some countries were observed to have experienced an investment slump after trade liberalization, suggesting that a “J-curve” effect was at work. Aghion et al. (2009) argue that both the positive and negative effects of trade liberalization on firms correlate perfectly with Schumpeterian theories. Generally, the

theoretical framework suggests that access to cheaper inputs via lower input tariffs increases firm profitability, and therefore investment, while lower output tariffs bring about more intense import competition, which results in lower profits and investment. Hence, theoretically, a decrease in input tariffs has the opposite effect on firm investment from a decrease in output tariffs.

The main case for liberalisation is premised on a particular causality, namely, that cutting protection and reducing tariff levels leads to a country that produces and exports according to its comparative advantage. Under this perspective, liberalisation improves allocative efficiency and eliminates deadweight losses, based essentially on the theory of first best. This also explains why economic theory has always emphasized the importance of free trade for increasing market efficiency and stimulating investment in new technologies (Keller, 2004). In addition to the static allocative efficiency gains, dynamic investment gains are cited in support of outward orientation, such as increased diffusion of knowledge and technology, more production in sectors with high world income, and price elasticity of demand.

The eclectic paradigm by Dunning (2000) aids our understanding of factors that attract FDI. In his framework, Dunning emphasised in his OLI paradigm the role that ownership, locational and internationalisation advantages play in attracting foreign investments. One such locational advantage that has attracted attention in literature is trade liberalisation, which, through market size, enables the firm to benefit from its ownership advantages like technology, brand reputation, and management skills. The use of rules of the origin in these FTAs encourages foreign firms to internalise trade liberalisation advantages. Dunning also argues that rent seeking, market seeking, efficiency seeking, and strategic asset seeking are motivating factors of FDI inflows. More specifically, “rent-seeking” motivation involves foreign firms seeking cheaper inputs of production such as primary goods. The “market seeking” motive involves foreign firms exporting or opening new plants in host countries to increase sales. This is an alternative for businesses that face trade restrictions like rules of origin within a liberalised environment.

Sohail et al. (2021) examined the experience of East Asian and South Asian countries that are members of regional trade arrangements and found that both regions attracted US\$280 billion and US\$54 billion, respectively, accounting for 18.1% of global FDI inflows in 2019. They associated Asian economic development with huge foreign capital and advanced technologies from Japan, the USA, and Europe (Sohail et al., 2021). This positive FTA-FDI relationship encourages governments to utilize FDI as a means of diversifying their economies, modernizing production capacity, connecting to global value chains, developing advanced technology, and generating job opportunities. Shah and Khan (2016) and Shah (2016), using panel data techniques, analysed the relationship between trade liberalization measures, macroeconomic stability, FDI inflows; and their findings revealed a positive association between trade liberalization and FDI inflows, suggesting that liberalization policies have the potential to attract foreign investment. Khan and Rahman (2019) investigated the effects of trade liberalization on foreign investment dynamics in a sample of developing countries using a mixed-methods approach. The results indicated mixed effects of trade liberalization on investment, with some countries experiencing positive effects while others faced challenges related to job displacement. Their results were like those of Shah (2016), who found that trade liberalization policies have led to increased FDI inflows and export opportunities in developing countries. However, they have also posed challenges, such as heightened competition and vulnerability to external shocks. They argue that the effectiveness of trade liberalization policies varies across countries and depends on factors such as institutional capacity, infrastructure, and trade-related regulations. Shah and Khan (2016), using a sample of developing countries, found the same effects. Their results revealed that,

while trade liberalization measures initially led to increased foreign investment inflows, the long-term impacts were contingent on factors such as institutional quality, infrastructure development, and technological capabilities. These moderating factors of governance quality, market openness, and industrial policy frameworks were identified by Wang and Zhang (2021) using East Asian developing countries of China, Vietnam, and Indonesia. Similar results were found by Ng and Tan (2020) with a Shah (2016) study finding heterogeneity in the effects of trade liberalization across different countries and sectors, highlighting the importance of context-specific factors in shaping foreign investment and development trajectories.

At the domestic investment level, Bortoluzzo et al. (2024), using Bloomberg data for Canadian and Korean public companies and the difference in difference technique, studied the relationship between investment in establishments and trade liberalization, an effect caused mainly by increased competitiveness. A negative and statistically significant relationship was found between investment and trade liberalization, an effect that was verified mainly for those establishments that are far from the frontier of the sector in which they operate; for firms in the frontier, this effect is positive. The theories proposed by Schumpeter (1943) argue that companies closer to the technological frontier of the sector in which they operate have an incentive to innovate in the presence of new entrants; the opposite occurs for companies farther from this innovation frontier. Kandilov and Leblebicioglu (2011), using plant-level panel data from Mexico's, found that, consistent with theory, the empirical analyses show that a reduction in import protection on final goods leads to lower plant-level investment, whereas reductions in tariffs and import license coverage on intermediate inputs result in higher investment. Also, firms with larger import costs experience a larger increase in investment following a reduction in import protection.

Pierce and Schott (2018) studied the impacts of trade liberalization on investments in U.S. industries and establishments using a difference in difference technique with agreement identification dummies and control variables for firms' specific characteristics. The model showed that investments in machinery suffered a decline for those manufacturers mostly exposed to the agreement, and the relationship between capital stock and the exposure to the agreement did not show statistically significant results. These results show that, if competition from imports is stiff, less efficient import competing firms will be driven out, resulting in capital goods investment falling.

Lian et al. (2020), using cross-country and sectoral data,³ showed that the decline in the relative price of tangible tradable capital goods provided a significant impetus to the capital deepening that took place during the same period. The study also showed that the reduction in trade costs (possibly through tariff liberalisation) and the associated rise in trade integration were important factors in the decline of the relative price of machinery and equipment and hence an increase in investment. They found that, on average, more than two-thirds of the fall in the relative price of tradable investment goods between 2000 and 2011 could be attributed to trade integration (Lian et al., 2020). The empirical estimates suggest that a 1-percent decline in the relative price of machinery and equipment is associated with a 0.3-percent increase in real investment in machinery and equipment.

In the case of South Africa, Mabugu (2007), using a CGE model, found that full trade liberalization led to growth in domestic investment by destination, with the long-run response being stronger than the short-run response. The study also highlighted how the specific destinations of investment might shift due to trade liberalization, with some sectors benefiting

³ They used sectoral producer price data across 33 sectors and 40 advanced and emerging market economies during 1995-2011 from the Socioeconomic Accounts of the World Input-Output Database.

more than others. For example, export-oriented sectors might see increased investment while some import-competing sectors might experience a decline. Trade liberalization in Africa has been driven by a variety of factors, with both domestic and external forces at play. While policymakers see it as a crucial tool for spurring domestic production and enticing foreign investment, there is also growing pressure for African nations to open their economies to the global market. This has led to a surge in international trade agreements as countries seek to boost economic growth, create job opportunities, and reduce poverty (African Development Bank, 2017; Mgonezulu et al., 2024). The impact of trade liberalization in Africa is a highly debated topic, with conflicting opinions on its effectiveness and potential consequences (Nesongano, 2023). While some argue that opening trade can lead to efficiency, technological advancements, and economic growth, others believe it can worsen inequality, weaken domestic industries, and threaten food security, especially in vulnerable sectors like agriculture and manufacturing (Rodrik, 2001; Jayne et al., 2018). Using data on 39 African countries and four trade liberalisation policies (freedom from tariffs, freedom from regulatory trade barriers, freedom from black-market exchange rates, and free movement of capital and people), Obuobi et al. (2022) found that, based on the system generalised method of moments (GMM) estimates, the composite trade liberalisation policy variable has a significant effect on FDI inflows. Further, the results exhibit a strong significant positive impact of freedom from tariffs, black-market exchange rate, and free movement of capital and people on FDI inflows to Africa whilst, regulatory trade barriers had no significant effect. Regulatory barriers like sanitary and phytosanitary standards, rules of origin, and customs administrative procedures are unavoidable, and it may be possible that export-oriented FDI firms have experience in handling or dealing with them. Although it is not clear which 39 African countries were included in this study and how trade liberalisation was defined, it differs from our study in that we extend the analysis to cover domestic private investment. FTAs create an environment for tariff-jumping investments and cheaper importation of capital and intermediate goods by local firms. There is generally a paucity of empirical literature on the effect of trade liberalisation on different forms of investment, particularly in the context of African FTAs. Most of the studies in this space are focused on trade (Dennis, 2006; de Melo and Regolo, 2013; Kagochi and Durmaz, 2018; Ngepah and Udeagha, 2018; Mukwaya, 2019; Moyo, 2023). Studies that have investigated the determinants of FDI and private investment emphasise the importance of market size and trade openness (Saini and Singhania, 2018; Imran and Rashid, 2022; Abdi et al., 2024) and ignore how trade liberalisation is a major driver of these determinants. This study is not only partly testing Dunning's (2000) eclectic theory on locational advantages but also reigniting FTA-investment debate. Athukorala (2020) argues that, over the past three decades, FTAs have become an integral and enduring part of the global trading system, and the number of FTAs notified to the World Trade Organization increased from 19 in 1990 to 292 by January 2019, suggesting that creating an attractive place for investment promotion is becoming more competitive than ever before. Developing countries of Africa therefore need to find more attractive ways of leveraging FTAs for investment promotion.

2. Methodology

This study will look at three African RECs that have established FTAs, namely: COMESA, with a membership of 21 countries; the EAC, made up of 8 countries; and SADC, home to 16 countries. Not all countries in these RECs participate in the FTAs. Thus, 5 countries in COMESA, 5 in the EAC, and 3 in SADC did not ratify the FTA agreement. The FTAs in these RECs started in different years,

and this will be considered when analysing the trade liberalisation impact. For example, the COMESA FTA was established in 2000, with the EAC and SADC FTAs established in 2005 and 2012, respectively. The impact of these FTAs on foreign and domestic investment will be investigated.

The following panel models will be used to analyse the impact of trade liberalisation on foreign and domestic investment:

$$FDI_{it} = \beta_0 + \beta_1 TLB_{it} + \beta_2 INST_{it} + \beta_3 INFRA_{it} + \beta_4 EG_{it} + \beta_5 FD_{it} + \varepsilon_{it} \quad (1)$$

$$DI_{it} = \beta_0 + \beta_1 TLB_{it} + \beta_2 INST_{it} + \beta_3 INFRA_{it} + \beta_4 RINT_{it} + \beta_5 INFLA_{it} + \beta_6 EG_{it} + \beta_7 FD_{it} + \varepsilon_{it} \quad (2)$$

where TLB_{it} is the variable of interest, the trade liberalisation indicator for country i in period t . This variable will be proxied by the trade liberalisation policy variables used by Obuobi et al. (2022), such as freedom from tariffs, freedom from regulatory trade barriers, freedom from black-market exchange rates, the compliance costs of trade, and the overall freedom to trade internationally. We will also use dummies to alternatively capture trade liberalisation, with each dummy taking the value of one if the country is a member of an FTA and zero otherwise.⁴ Thus, the *SADC_dummy*, *EAC_dummy* and *COMESA_dummy* capture the specific FTAs used in this study. This captures the fact that trade liberalisation is enjoyed by countries that are members of an FTA. We also created a dummy called *ALLFTA_dummy* to capture general FTA membership regardless of whether it's a COMESA, EAC or SADC FTA. This dummy takes the value of one if the country is a member of any FTA and zero otherwise. We use this general FTA dummy to ascertain whether the effect of trade liberalisation on investment is unconditional and thus not REC-dependent. This dummy is also used to minimise the problems of overlapping membership. *INST* represents institutional indicators and these will be proxied by the World Bank Governance indicators, such as rule of law, control of corruption, political stability, and government effectiveness. Confidence in the quality of contract enforcement, property rights, the police, the courts, and the capture of the state by elites and private interests are important locational factors considered by investors and, if poor, may reduce the trade liberalisation benefits. Investors look for locations that minimise operational costs and create stable and predictable working environment; and this is why places where the likelihood of making irregular payments to get things done is high, where political instability and/or politically motivated violence are rife, and where the quality of public services and civil service, and the quality and credibility of policy formulation and implementation are low may scare away potential investment from both local and foreign companies, even in the context of trade liberalisation. *INFRA* measures infrastructure quality; this will be proxied by the percentage of the population with access to electricity and the telecommunications infrastructure will be proxied by mobile subscriptions per 100 people. *EG* is economic growth, measured using the annual growth rate. *FD* measures financial development crucial for facilitating the flow of investment, and it is estimated using total credit to the private sector and broad money, all expressed as a percentage of GDP.

⁴ The value of one, will be from the year the country joined the FTA. Thus, even though our data starts from year 2000, SADC and EAC FTAs started in 2012 and 2005, respectively. Before FTA implementation, dummies will take a value of zero for all countries belonging to a REC. This helps in capturing the before and after situation.

Since the objective of the study is to examine the effects of trade liberalisation on both foreign and domestic investment, we will run another model focusing on the latter. The additional variables used are *INT* to measure interest rates proxied by lending rates and *INFLA* to capture macroeconomic stability using the inflation rate. Domestic investment, *DI*, and foreign investment, *FDI*, will be captured using private gross fixed capital formation FDI inflows, all expressed as a percentage of GDP.

We have 29 countries that belong to these three African FTAs and our data will cover the period from 2000 to 2019 (20 years) and, since our cross sections are greater than our timeline, we will use panel static models instead of panel time series techniques. For robustness purposes we will also use a GMM models proposed by Arellano and Bond. This approach will help address some econometric issues relating to endogeneity and hysteresis effects.

2.1. Data issues

The data used in this study is sourced from the World Bank World Development and Governance Indicators as well as the Fraser Institute. Proxies for the variable of interest (trade liberalisation) are sourced from the Fraser Institute. Supplementary descriptive data was sourced from World Bank *Doing Business* reports for the period from 2015 to 2019, whilst EAC, SADC and COMESA websites provided information on member countries and investment policies. Our intention is to cover the period before and after trade liberalisation in these RECs,⁵ and the study period will start in 2000 and end in 2019 to exclude the COVID 19 period, which disrupted many economic activities, including investment flows.

3. Results presentation and analysis

3.1. Descriptive analysis of data

This study uses three RECs, namely: COMESA, with about 21 countries, only 16 of which are members of the COMESA FTA; the EAC, made up of 8 countries, only 5 of which are members of the customs union; and the SADC FTA, made up of 13 out of 16 member countries. All together, these three RECs comprise 15 countries with multiple memberships, and the remaining 14 belong to only one REC. The REC dummies created above capture FTA and non-FTA membership and thus make these indicators variable.

The variables of interests are indicators that proxy trade liberalisation and investment inflows in the study. We use two groups of indicators for trade liberalisation: firstly, dummies to capture the period of FTA implementation and membership, with the dummy taking the value of one if the country joined the FTA and zero otherwise. As stated above, 13 out of 16 SADC countries joined the FTA in 2012, whilst 5 out of 8 were members of the EAC customs union in 2005. Of 21 countries, 16 joined the COMESA FTA when it was implemented in 2000. The dummies show that 18% of the 29 countries in the sample are SADC FTA members, 13% are EAC members, and 55% are COMESA members; all together, about 66% of these 29 countries belong to an FTA (see table A1 in the appendix). We use economic freedom data from the Fraser Institute which is disaggregated into five sub-indicators (freedom from tariffs, non-tariff barriers, compliance costs

⁵ Due to data availability (Fraser Institute indicators are available only from year 2000), this will not be possible for COMESA countries because the COMESA FTA was established in 2000. However, variation in the *COMESA_dummy* will be coming mostly from the five countries that did not join the FTA.

to trade, black-market exchange rate, and regulatory barriers). Remember, these indicators are measured using an index ranging from 0 to 10, with higher values corresponding to better outcomes. Non-tariff and regulatory trade barriers have an average lower than five, suggesting that they are low and need to be improved (table A1 in the appendix).

Table 2 – Summary of the main variables of interest

Variable	SADC FTA		EAC FTA		COMESA FTA		ALL FTAs	
	Without	With	Without	With	Without	With	Without	With
FDI % GDP	3.5	5.4	2.8	2.37	3.8	3.6	3.3	3.8
Domestic investment as a % of GDP	14.6	15.9	13.1	17.8	16.3	14.2	15.6	15.0
Trade liberalisation variables								
Tariffs	6.1	6.7	5.8	6.5	6.5	6.3	6.5	6.3
Non-tariffs	4.4	4.8	4.4	4.2	4.0	4.5	3.8	4.5
Black-market exchange rate	9.3	9.7	8.8	9.6	9.7	8.9	9.6	9.1
Compliance costs	5.3	5.6	6.4	4.3	5.3	5.0	4.6	5.3
Regulatory barriers	4.7	5.2	5.0	4.2	4.4	4.6	4.0	4.7
Freedom to trade	6.0	6.6	6.0	6.2	6.0	6.1	5.8	6.2

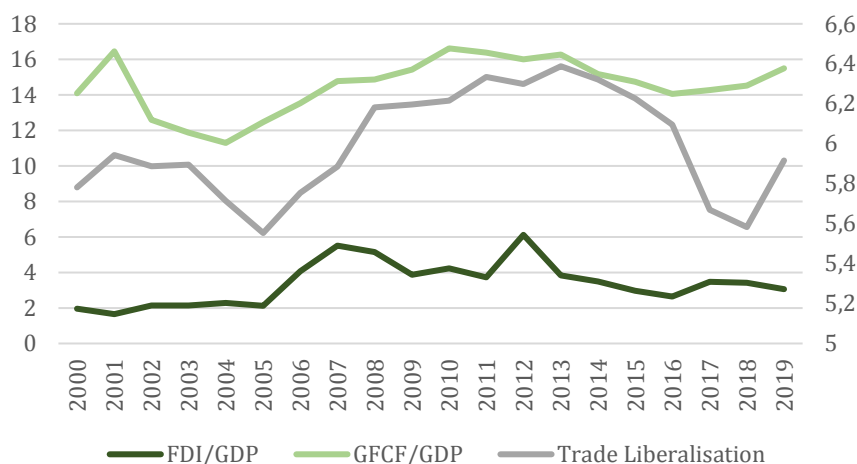
Source: Authors' own calculations. *Without* stands for the average for countries that are not members of the FTA, whilst *With* is the average for FTA members.

Table 2 compares the averages for countries that did not join the FTA with those that joined. In the case of SADC, FTA establishment in 2012 appears to have improved investment performance compared to the pre-FTA era. This *prima facie* suggests that liberalising trade in SADC is associated with increases in foreign and domestic investments. The situation is different when it comes to the EAC, COMESA, and ALL FTA regions. There is no clear relationship between the movement of trade liberalisation variables and investment variables. Figures 1, 2 and 3 partly support the information in table 2. We conducted pairwise correlation analysis and the results show that FDI is positively correlated only with the SADC and ALL FTA dummies, whilst the domestic investment variable is positively correlated with the SASC and EAC dummies (the analysis results are available on request). The Fraser Institute trade liberalisation variables are all positively correlated with both FDI and domestic investment, with the level of association being relatively higher with the overall freedom to trade internationally variable. The summary of other control variables used is found in table A1 in the appendix. These descriptive statistics show that the relationship between investment and trade liberalisation variables is not clear cut and is therefore an estimation issue. Regression models will ascertain the nature and direction of causality between these variables of interest.

Before estimating our main results, we also carried out pairwise correlation analysis using control variables and trade liberalisation and governance indicators. Results, shown in the appendix (tables A2, A3, A4), indicate low levels of correlation amongst the trade liberalisation indicators from the Fraser Institute except for regulatory barriers, non-tariff barriers, and compliance costs to trade (see table A2). However, all governance indicators are generally highly correlated (similar relationships were found by Gliberman and Shapiro, 2002; Daude and Stein,

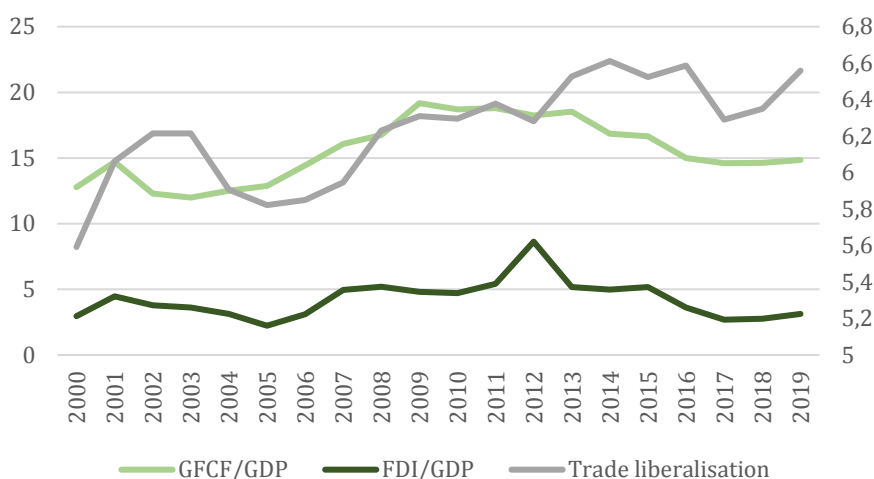
2007; Buchanan et al., 2012), whilst FTA dummies show weak correlation except for the overall ALL FTA and the COMESA dummies (see tables A3 and A4). Variables with a high level of correlation were introduced separately in the models to avoid multicollinearity problems. Since the Fraser Institute variables capture the same effect (trade liberalisation), we introduced them separately into the models.

Figure 1 – COMESA FDI, GFCF and Trade Liberalisation



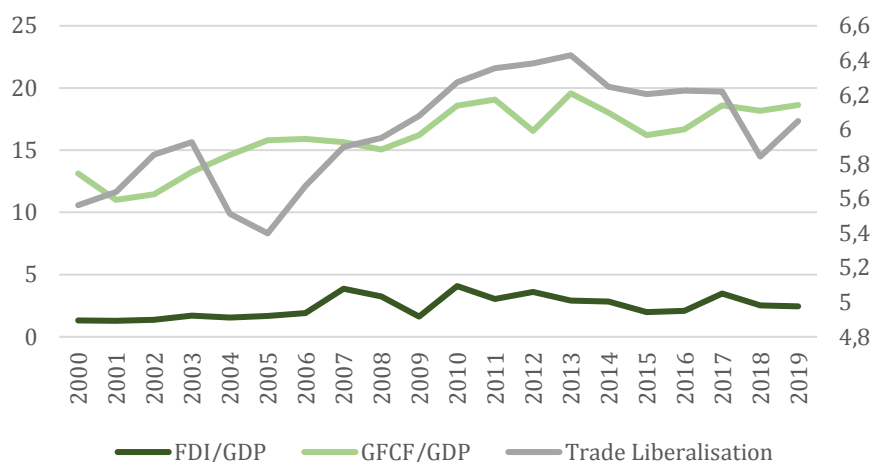
Source: World Bank (2025) and Fraser Institute (2024). GFCF is gross fixed capital formation, a proxy for domestic investment, whilst FDI is foreign direct investment.

Figure 2 – SADC FDI, GFCF and Trade Liberalisation



Source: World Bank (2025) and Fraser Institute (2024). GFCF is gross fixed capital formation, a proxy for domestic investment, whilst FDI is foreign direct investment.

Figure 3 – EAC FDI, GFCF and Trade Liberalisation



Source: World Bank (2025) and Fraser Institute (2024). GFCF is gross fixed capital formation, a proxy for domestic investment, whilst FDI is foreign direct investment.

3.2. Empirical results

3.2.1. Trade liberalisation and foreign direct investment

To analyse the effects of trade liberalisation on FDI inflows in these three RECs, we first use the free trade dummies. We employ the fixed effects model,⁶ given the fact that we are studying trade liberalisation in specific FTAs; this suggests that our sample is not random and therefore variation in these selected countries is our source of sampling error and our results are therefore generalizable only to the countries in our sample (Kramer and Rosenthal, 1998). The fixed-effect model also corrects for the impact of individual time-invariant unobservable factors through first-order differencing, thus overcoming the omitted variable bias that influences the accuracy of the estimation result (Wooldridge, 2010). For example, the working culture and quality of education in each country affect the ability of trade liberalisation to attract FDI inflows. With FTAs, it is possible that countries that trade more with each other also invest more in each other (Reed et al., 2016). The fixed effects model assumes that these effects of unchanging unmeasured variables can be captured by time-invariant country-specific dummy variables. Our preference for the fixed effects model is also based on the fact that, whether a country joined the FTA before or after another country does not matter (constant between group variations); what is important is within variation, that is, how joining the FTA improved FDI flows compared to the period before joining.

The results show that the COMESA dummy is highly correlated with the ALLFTA dummy (see table A4 in the appendix) and thus dropped. The other reason is that the COMESA FTA started in year 2000, and our dataset also runs from 2000 to 2019. This does not provide the within-group variation necessary to run the fixed effect model. SADC FTA dummies have an insignificant effect on FDI inflows, whilst the EAC dummy has a positive and significant effect (see table 3). The effect

⁶ $FDI_{it} = \beta_0 + \beta_1 TLB_{it} + \beta_2 INST_{it} + \beta_3 INFRA_{it} + \beta_4 EG_{it} + \beta_5 FD_{it} + c_i + \varepsilon_{it}$

is consistent even after controlling for various institutional indicators. The insignificant negative effect of SADC and ALLFTA dummies could be explained partly by lack of ratification and domestication of the COMESA Common Investment Agreement (CCIA), adopted in 2007,⁷ and the issue of overlapping membership. Of the 16 SADC countries, 9 are also members of COMESA, whilst 7 out of 8 of the EAC countries belong to either COMESA or SADC, and so the lack of harmonisation of investment laws and policies in these RECs may create uncertainty and distortions. The EAC region has been growing, on average, by 6% per annum over the period from 2000 to 2019, compared to 4% in SADC and COMESA (WDI, 2024); and the fact that the EAC also scores better on the ease of doing business index (see table A6) may explain the FTA dummy results in table 3. The effect of these dummies is supported by the FDI trends in these regions. Thus, EAC data shows that the FDI share of GDP has been rising, from 1.6% after formation of the customs union in 2005, to 4% in 2010, before falling to 2.4% in 2019. However, in the case of SADC, the FDI share fell from 8.6% in 2012 to 3.1% in 2019, whilst for COMESA it has been increasing marginally, from 2% in 2000 to about 3% in 2019. The positive effect of FTA dummies is supported by findings from Goldar and Banga (2007), Rasekhi and Seyedi (2010) and Shah and Khan (2016).

Table 3 – Trade liberalisation and FDI using FTA dummies (fixed effects models)

Ln FDI	Model 1	Model 2	Model 3	Model 4	Model 5
SADC dummy	0.112 (0.194)	0.087 (0.192)	0.041 (0.191)	0.050 (0.188)	0.033 (0.196)
EAC dummy	0.578** (0.276)	0.533* (0.281)	0.568** (0.277)	0.514* (0.271)	0.719** (0.281)
All FTA dummy	0.286 (0.256)	0.259 (0.256)	0.219 (0.259)	0.216 (0.254)	0.305 (0.259)
Log electric access	0.002 (0.007)	0.003 (0.007)	0.001 (0.007)	0.001 (0.007)	0.002 (0.007)
GDP growth	0.006 (0.009)	0.003 (0.008)	0.007 (0.009)	-0.004 (0.008)	0.007 (0.008)
Log inflation	-0.085 (0.067)	-0.111 (0.069)	-0.085 (0.068)	-0.124* (0.068)	-0.077** (0.068)
Log broad money	0.491** (0.247)	0.540** (0.249)	0.475* (0.247)	0.409* (0.244)	0.465* (0.251)
Control of corruption	0.641** (0.262)				
Political stability		0.349** (0.146)			
Government effectiveness			0.588** (0.249)		
Regulatory quality				0.988*** (0.253)	
Rule of law					0.020 (0.293)
Observations	400	400	400	400	400

Note: Levels of significance: ***1%, **5% and * 10%. Standard errors are in parenthesis.

⁷ Out of 29 countries in this study, 22 belonged to COMESA.

Table 4 – Trade liberalisation and FDI using Fraser Institute trade freedom indicators

Ln FDI	Model 1	Model 2	Model 3	Model 4	Model 5
Tariffs	0.030 (0.054)	0.228*** (0.082)			0.228*** (0.082)
Non-tariff	0.153 (0.101)	0.276*** (0.102)			0.276*** (0.103)
Compliance costs of trade		0.096** (0.043)			0.096** (0.043)
Regulatory trade barriers				0.070 (0.057)	
Black-market exchange rate		0.216*** (0.055)			0.342*** (0.082)
Freedom to trade internationally			0.218* (0.116)		-0.574** (0.277)
Log electric access	0.004 (0.006)	-0.005 (0.006)	-0.002 (0.007)	-0.004 (0.006)	-0.001 (0.007)
Log GDP growth	0.037** (0.017)	0.037** (0.017)	0.043** (0.017)	0.009 (0.009)	0.032* (0.017)
Log inflation	0.220*** (0.082)	0.157* (0.085)	0.214*** (0.082)	0.155** (0.067)	0.154* (0.084)
Log broad money	1.370*** (0.290)	1.803*** (0.317)	1.310*** (0.281)	0.655*** (0.246)	1.956*** (0.324)
Regulatory Quality	1.172*** (0.279)	0.709** (0.300)	1.103*** (0.267)	0.992*** (0.251)	0.859*** (0.307)
Observations	332	323	334	380	323

Note: Levels of significance: ***1%, **5% and * 10%. Standard errors are in parenthesis.

The effect of other control variables, like infrastructure, inflation, financial deepening, and institutional indicators, is mixed (see table 3). Low levels of corruption, stable political environment, and the ability of government to design and implement sound public policies make doing business easy and promote a good investment climate. The same applies to the ability to obtain affordable credit, repatriate profits, and facilitate offshore borrowing through financial deepening proxied by broad money. The negative effect of inflation suggests that macroeconomic instability is not conducive for FDI, whilst the weak effect of GDP growth could be due to endogeneity concerns and the fact that regional growth matters more than country level growth. Studies by Borensztein et al. (1998), Sokang (2018) and Ayenew, (2022), found positive effects on FDI of growth, with Benetrix et al. (2023) finding the effect far from being stable, suggesting a bidirectional relationship between FDI and growth and hence endogeneity.⁸ We correct for endogeneity using the GMM model in table 5. The consistency in GDP growth results suggests that FDI inflows in these RECs could be resource-seeking or export-oriented and not market-seeking. Financial development and institutions appear to be significant determinants of FDI inflows lending support to findings by Harns and Ursprung (2002), Lucke and Eichler (2016), Desbordes and Wei (2017), Peres et al. (2018), Sabir et al. (2019) Irandoust, (2021) and Iddrisu et al. (2024).

⁸ Using the Durbin Wu Hausman test and checking the significance of the residuals (res_X3 and res_XY), we reject the null hypothesis which assumes exogeneity. These results are available on request. We excluded them so as not to clutter the analysis.

There is also a possibility of bidirectional causality between FDI and financial deepening, and this is again attended to by running a GMM model, as in table 5. The mixed positive effect of financial deepening on FDI in these countries may result from the poor levels of financial sophistication, with descriptive statistics in table A1 in the appendix showing averages lower than 50% (42% for the broad money supply and 26% for domestic credit to the private sector, all as percentages of GDP).

To check for the robustness of our trade liberalisation variables, we alternatively used the Fraser Institute trade freedom indices, as in table 4. So as not to clutter the analysis, we controlled for one institutional indicator (regulatory quality). The regulatory trade barrier variable is composite and made up of the compliance costs of trade plus the black-market exchange rate variables, and that is why they are introduced separately in the models. We continue our estimation using a fixed effects model.

Table 5 – Trade liberalisation and FDI using GMM models

Ln FDI	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Ln FDI_1	0.147* (0.088)	0.187** (0.094)	0.121 (0.088)	0.139 (0.090)	0.129 (0.088)	0.137 (0.088)
SADC dummy	0.421* (0.222)					
EAC dummy	0.005 (0.447)					
Tariffs		0.062 (0.101)				
Non-tariff		0.213 (0.176)				
Compliance costs of trade			0.079* (0.046)			
Regulatory trade barriers				0.211** (0.085)		
Black-market exchange rate					0.092 (0.078)	
Freedom to trade internationally						0.189 (0.169)
Log electric access	0.505* (0.300)	0.491 (0.314)	0.495 (0.313)	0.491 (0.304)	0.454 (0.315)	0.467 (0.315)
Log GDP growth	0.029 (0.084)	0.096 (0.087)	0.118 (0.088)	0.066 (0.083)	0.088 (0.087)	0.093 (0.087)
Log inflation	0.131 (0.088)	0.151 (0.094)	0.154 (0.101)	0.137 (0.088)	0.163 (0.100)	0.127 (0.096)
Log broad money	0.062 (0.503)	0.391 (0.528)	0.475 (0.543)	0.069 (0.504)	0.581 (0.551)	0.419 (0.528)
Government effectiveness	1.077** (0.469)	1.395*** (0.529)	1.486*** (0.555)	1.286*** (0.496)	1.423*** (0.532)	1.369*** (0.525)
Observations	284	251	251	251	251	251

Note: Levels of significance: ***1%, **5% and * 10%. Standard errors are in parenthesis.

The pattern of results is replicated in table 5, particularly when looking at control variables. The effects of tariffs and non-tariffs on FDI is positive in model 2 and model 4. It is important to remember that higher values of these indicators suggest freedom from tariffs and thus higher trade liberalisation. The significance of the tariff variables supports the argument that reducing trade barriers increases market size, reduces the cost of intermediate inputs, encourages firms to produce more, and is thus attractive to foreign investors. The black-market exchange rate and compliance costs of trade have positive significant effects on FDI, suggesting that being free from this market means foreign currency shortages or restrictions are minimal and foreign exchange prices are determined largely by market forces. Black markets distort not only exchange rates but even the benefits of trade liberalisation. Foreign investors prefer destinations where it is easy to source and repatriate their profits in the preferred currency. The significance of compliance costs suggests that improving the efficiency of trading across borders in terms of time and documentation is very important, not only for export-oriented FDI but even for importation of inputs. The overall trade freedom indicator was used in model 5 in table 5 above and is positive and significant. The positive effect means that overall trade liberalisation has a positive effect on FDI inflows. These results are partly supported by findings from Obuobi et al. (2022), who found positive and significant results for most of these trade liberalisation indicators except for freedom from regulatory trade barriers.

To further check for the robustness of our FDI-trade liberalisation results, we estimated a GMM model to capture the hysteresis effect (FDI inflows in current year are affected by FDI inflows in previous years). Foreign investors easily locate in areas where other investors are moving to.

The GMM models have the added advantage of correcting for endogeneity. Thus, as much as it is possible that GDP growth signals a growing market potential that is attractive to market-seeking FDI, increased inflows of FDI also increase the levels of GDP, creating bidirectional causality. Dunning's eclectic paradigm states that ownership, location, and internalisation advantages drive FDI inflows. This means the ability to manage trade secrets, intellectual property rights, and other unmeasurable locational advantages attract FDI inflows and may create endogeneity challenges in our models through omitted variables. Reed et al. (2016) argue that an important and serious complication in policy analysis is that the presence of an FTA is likely to be endogenous. That is, using participation in an FTA as an explanatory variable for FDI without controlling for endogeneity would likely produce biased estimates and misguided policy analysis.

As expected, the lagged FDI variable has a positive significant effect on current FDI levels because of the hysteresis effect, whilst both the SADC and EAC FTA dummies have a positive effect. The positive significant effect of the SADC FTA dummy suggests that trade liberalisation in the region promotes FDI inflows. The attractiveness of the SADC region as an investment destination could be due to its good institutional environment and GDP per capita. The region performs better than COMESA and the EAC on all governance indicators and has a higher level of buying power per capita (see tables A6 and A7 in the appendix). The ratification of the SADC investment protocol in 2006 and the establishment of the FTA in 2012 have created a good certain environment for FDI.

When using Fraser Institute trade liberalisation indicators, the tariff, non-tariffs barrier, and freedom to trade indicators have weak effects, whilst regulatory trade barriers and compliance costs have positive and significant effects. Government effectiveness has a positive and significant effect on FDI inflows, as was the case in other panel models in table 5 above. Although the sign of other controls has remained consistent, significance levels have changed. This suggests an

unstable relationship with FDI inflows. What is consistent in these GMM results is the direction of the effects but not the significance.

3.2.2. Trade liberalisation and domestic private investment

Another objective of this study is to investigate the effect of trade liberalisation on local private investment. This is because liberalising trade creates incentives for local investors in the form of lower import costs of raw materials and capital goods. It also affects the productivity of inefficient firms and may force them to disinvest whilst efficient ones expand operations and invest more. Fixed effects⁹ results on private domestic investment are shown in table 6.

Table 6 – Trade liberalisation and private domestic investment using FTA dummies (fixed effects models)

Private domestic investment	Model 1	Model 2	Model 3	Model 4	Model 5
SADC dummy	0.051 (0.082)	0.042 (0.078)	0.036 (0.077)	0.063 (0.078)	-0.046 (0.079)
EAC dummy	0.306 (0.213)	0.321 (0.203)	0.296 (0.200)	0.368* (0.204)	0.180 (0.199)
ALLFTA dummy	-0.001 (0.123)	0.004 (0.123)	-0.023 (0.121)	-0.044 (0.124)	0.086 (0.121)
Log electric access	0.007** (0.003)	0.008 (0.004)	0.008** (0.004)	0.008** (0.004)	0.006 (0.004)
Log GDP growth	0.020*** (0.006)	0.021*** (0.007)	0.020*** (0.007)	0.019*** (0.007)	0.018*** (0.006)
Log inflation	0.046 (0.033)	0.047 (0.032)	0.057* (0.033)	0.042 (0.033)	0.047 (0.031)
Log domestic credit to private	0.165 (0.108)	0.182* (0.109)	0.179* (0.106)	0.156 (0.107)	0.184* (0.103)
Lending interest rates	-0.007* (0.004)	0.007 (0.003)	0.003 (0.004)	-0.005 (0.004)	-0.004* (0.003)
Control of corruption	0.006 (0.150)				
Political stability		-0.070 (0.089)			
Government effectiveness			-0.321** (0.141)		
Regulatory quality				-0.198* (0.117)	
Rule of law					-0.502*** (0.138)
Observations	186	186	186	186	186

Note: Levels of significance: ***1%, **5% and * 10%. Standard errors are in parenthesis.

⁹ $DI_{it} = \beta_0 + \beta_1 TLB_{it} + \beta_2 INST_{it} + \beta_3 INFRA_{it} + \beta_4 RINT_{it} + \beta_5 INFLA_{it} + \beta_6 EG_{it} + \beta_7 FD_{it} + c_i + \varepsilon_{it}$

The SADC FTA dummy generally has a positive consistent effect on domestic private investment whilst the EAC dummy's effect is not only positive but significant. The ALLFTA dummy has a consistent insignificant effect (see table 7). Poor ease of doing business, the lack of ratification and domestication of the COMESA CCIA adopted in 2007, and the issue of overlapping membership are still some of the reasons behind these results, given that 72% of these countries are members of COMESA. GDP growth, infrastructure, and domestic credit to the private sector, which is proxying financial development, all have a positive and significant effect. Availability of affordable credit that is characteristic of developed financial markets and good GDP growth prospects encourage domestic investment expansion. The significance of country-level GDP growth in these models suggests that domestic investors may prefer establishing themselves first in their familiar domestic market before expanding to the regional market. The significance of access to electricity emphasises not only the importance of power but also the general provision of good quality infrastructure to boost local investment. These results are supported by findings by Ghura (1997), Calderón and Servén (2004), Fraga and Resende (2022), He and Yoo (2024), Iheonu et al. (2023) and Keho (2023). The issue of endogeneity from simultaneity affects the relationship between private investment, financial deepening, and economic growth and is addressed using the GMM model.

Table 7 – Trade liberalisation using trade freedom indicators and private domestic investment

Log private domestic investment	Model 1	Model 2	Model 3	Model 4	Model 5
Tariffs	-0.006 (0.022)			0.057 (0.039)	0.004 (0.023)
Non-tariff	0.099** (0.038)			0.122*** (0.039)	
Compliance costs of trade	0.011 (0.012)			0.034** (0.017)	
Regulatory trade barriers		-0.014 (0.021)			
Black-market exchange rate	0.044*** (0.017)			0.107*** (0.035)	
Freedom to trade internationally			0.072 (0.047)	0.254** (0.127)	
Log electric access	0.004 (0.004)	-0.006* (0.003)	0.003 (0.004)	0.006 (0.004)	0.003 (0.004)
Log GDP growth	0.008 (0.007)	0.018*** (0.006)	0.013** (0.007)	0.007 (0.007)	0.013* (0.007)
Log inflation	0.053 (0.034)	0.063** (0.030)	0.068* (0.035)	0.048 (0.034)	0.076** (0.035)
Lending interest rate	0.006* (0.003)	0.003 (0.003)	0.005 (0.003)	0.006* (0.003)	0.004 (0.003)
Log domestic credit	0.315*** (0.094)	0.238*** (0.091)	0.268*** (0.093)	0.30*** (0.092)	0.292*** (0.096)
Rule of law	-0.169 (0.150)	-0.469*** (0.134)	-0.216 (0.144)	0.011 (0.173)	-0.202 (0.152)
Observations	166	186	166	166	166

Note: Levels of significance: ***1%, **5% and * 10%. Standard errors are in parenthesis.

Lending interest rates have an expected negative and significant effect on domestic investment, suggesting that a high cost of borrowing constrains the ability of domestic firms to invest more (Beccarini, 2007; Ndikumana, 2008; George-Anokwuru, 2017; Ngoma et al., 2019; Iddrisu and Alagidede, 2020). Leshoro and Wabiga (2023) find short-run and long-run asymmetric relationships between the interest rate and private investment. Thus, high interest rates may increase the cost of capital but, at the same time, they may increase savings and availability of more credit. Inflation has a weak effect on domestic private investment, probably indicating that moderate amounts of inflation are good for growth and for export-oriented domestic investment. Generally, inflation levels in the sampled countries and over the study period were moderate, except for South Sudan and Sudan. In these cases, the exchange rate effects of increasing inflation are good for exports (Madsen, 2003; Kellogg, 2014; Dejuan-Bitria and Ghirelli, 2021; Larch et al., 2022).

In the case of institutions, corruption and political instability are the only indicators that are not significant. Domestic investors have an added advantage over foreign investors in that they understand the terrain in which they operate and know how to navigate it. This unobserved ability enables them to manage the institutional challenges in any country, unlike foreign investors, and may explain why some governance indicators are not significant. If rule of law, government effectiveness, and regulatory quality significantly improve domestic private investment, it is probably because these enable investors to protect their rights and thus guarantee investment safety. Gastanaga et al. (1998), Neumayer and Spess (2005), Busse and Hefeker (2007), Kinda (2010), Asiedu and Lien (2011), Tuomi (2011), Asongu (2012), Jadhav and Katti (2012), Cleeve (2012), Abdioglu et al. (2013), Bartels et al. (2014), Asongu et al. (2020), Chen et al. (2021) found mixed effects of different institutional variables on private investment.

Results in table 7 show the effects of using the Fraser Institute trade freedom indicators. Tariffs have a weak effect on investment whilst non-tariffs, compliance costs, the black-market exchange rate, and overall freedom to trade internationally have positive significant effects. It is therefore important to minimise, rationalise, and streamline these cross-border trade measures to reduce their impact on trade and hence private investment. The effect of other control variables is mixed and marginally different. These results may partly be affected by the endogeneity of some variables in the model, like GDP growth, and the unobserved effects discussed above.

Results using the GMM estimator, which corrects for endogeneity, are in table A5 in the appendix. The variable of interest like the SADC FTA dummy is insignificant, whilst the EAC dummy is positive and significant. All Fraser Institute trade freedom indicators have expected effects, with tariffs, trade freedom, and the black-market exchange rate having significant effects, suggesting that trade liberalisation is good for private investment.

4. Conclusions and policy recommendations

Trade liberalisation is the economic tool that many countries use to drive trade and economic growth, with the hope of reducing poverty, unemployment and inequality. Liberalising trade has also been touted as promotive of both foreign direct and private domestic investment, since it increases trade freedom and market size, reduces the costs of tradable inputs, and improves efficiency. The liberalisation of trade (through FTA formation) in the EAC, COMESA and SADC regions in 2005, 2000, and 2012, respectively, appears not to have significantly increased FDI inflows. Results show that the EAC FTA and, to a lesser extent, the SADC FTA had more beneficial effects on FDI and domestic investment than the COMESA FTA. The differential effects of the FTA

dummies are probably explained by differences in GDP growth, ease of doing business, institutional environment, and lack of ratification and domestication of the 2007 COMESA CCIA as well as the issue of overlapping membership. Overlapping membership creates uncertainty and discourages investment and, therefore, the move to establish a tripartite FTA connecting these three RECs (COMESA, the EAC, and SADC) is going to help iron out policy differences. The COMESA CCIA must be aligned with the SADC Protocol on Finance and Investment as well as the EAC Industrialisation Policy and Strategy 2012-2032. These three should also be compatible with the broader AfCFTA Protocol on Investment. There is a need to ensure that this tripartite agreement, signed in 2015, is ratified by member countries in these RECs and that investment laws, rules of origin, and common external tariffs are reconciled. As Kher et al. (2024) from the World Bank puts it, “the AfCFTA Investment Protocol is a bold step forward and goes beyond investor protections. It also addresses sustainability, transparency, and long-term growth; to unlock its potential, African countries will need to undertake a comprehensive set of legal, policy, and institutional reforms”. This can be done by strengthening and balancing investment laws, incorporating sustainable development issues, streamlining investment processes, building stronger institutions, and fostering state-to-state cooperation. Effective implementation of these investment reforms requires, inter alia, strong political will, resources, and capacity building as well as active participation of the private sector and civil society (Kher et al, 2024).

The significance of trade liberalisation proxies calculated by the Fraser Institute, such as freedom from the black-market exchange rate, regulatory trade barriers, tariffs, and the overall freedom to trade internationally, suggests that trade reforms are important in driving investment promotion. There is, therefore, a need for FTAs, in addition to removing tariffs, to go further and improve non-tariff barriers to trade. Improving customs efficiency, possibly through the implementation of one-stop border posts and of a customs management system like the United Nations Automated System for Customs Data (ASYCUDA World), would be a step in the right direction. A scientific and objective approach should be used in determining sanitary and phytosanitary standards to reduce the compliance costs of trade.

4.1. Study limitations and opportunities for further research

This study investigated only the impact of trade liberalisation on FDI and domestic investment, without focusing on the specific sectors of the economy that have the potential to attract investment inflows. Investment promotion in Africa should be linked to the continent or REC industrialisation drives. It will, therefore, be interesting to investigate which type of investments are responsive to trade liberalisation and how these feed into the industrialisation strategies of the RECs. Understanding whether FDI inflows to African RECs are trade substituting (in the case of tariff-hopping investment) or trade complementary (in the case of export-oriented FDI) will also be interesting. Tariff-hopping FDI should be directly related to FTA formation and thus a good signal of the effectiveness of trade liberalisation.

Appendix

Table A1 – Summary of the variables

Variable acronym	Variable definition	Obs	Mean	Standard deviation	Min	Max
INFRA	Access to electricity	573	42.77	31.19	0.8	100
INFRA	Mobile subscriptions	567	46.36	44.39	0	185.56
EG	GDP growth rate	545	4.17	6.67	-50.33	86.82
FDI	Foreign direct investment	547	3.67	5.19	-10.03	56.28
INFLA	Inflation	502	13.35	39.60	-16.86	513.91
FD	Broad money	529	42.18	31.25	2.86	176.79
FD	Domestic credit to private sector	475	26.07	27.41	0.49	142.42
RINT	Lending interest rate	433	18.31	13.74	6	103.16
DI	Gross fixed capital formation	291	15.20	6.58	0	34.94
INST	Voice and accountability	541	-0.71	0.82	-2.23	0.98
INST	Political stability	541	-0.58	1.00	-2.50	1.28
INST	Government effectiveness	541	-0.69	0.75	-2.44	1.15
INST	Regulatory quality	541	-0.69	0.78	-2.50	1.20
INST	Rule of law	541	-0.65	0.74	-2.50	1.02
INST	Control of corruption	541	-0.56	0.69	-1.84	1.24
TLB	Tariffs	410	6.37	1.38	0	9.49
TLB	Non-tariff barriers	500	4.27	1.74	0	10
TLB	Black-market exchange rate	413	9.22	2.33	0	10
TLB	Compliance costs of trade	404	5.10	2.49	0	9.81
TLB	Regulatory trade barriers	500	4.53	1.83	0	8.66
TLB	Freedom to trade internationally	418	6.07	1.26	1.75	8.86
TLB	SADC_dummy	580	0.18	0.38	0	1
TLB	EAC_dummy	580	0.13	0.33	0	1
TLB	COMESA_dummy	580	0.55	0.49	0	1
TLB	ALLFTA_dummy	580	0.66	0.47	0	1

Source: Authors' own calculations

Table A2 – Pairwise correlation matrix for trade liberalisation variables

	Tariffs	Non-tariff barriers	Compliance costs of trade	Regulatory trade barriers	Black-market exchange rate
Tariff	1.000				
Non-tariff barriers	0.195	1.000			
Compliance costs of trade	0.084	0.311	1.000		
Regulatory trade barriers	0.142	0.801	0.893	1.000	
Black-market exchange rate	0.195	0.165	0.179	0.216	1.000

Table A3 – Pairwise correlation matrix for institutional governance indicators

	Voice and accountability	Political stability	Government effectiveness	Regulatory quality	Rule of law	Control of corruption
Voice and accountability	1.000					
Political stability	0.677	1.000				
Government effectiveness	0.743	0.742	1.000			
Regulatory quality	0.800	0.724	0.909	1.000		
Rule of law	0.797	0.807	0.931	0.911	1.000	
Control of corruption	0.669	0.779	0.863	0.803	0.870	1.000

Table A4 – Pairwise correlation matrix for FTA dummies

	SADC dummy	EAC dummy	COMESA dummy	ALLFTA dummy
SADC dummy	1.000			
EAC dummy	-0.070	1.000		
COMESA dummy	-0.103	0.192	1.000	
ALLFTA dummy	0.330	0.275	0.793	1.000

Table A5 – Trade liberalisation and private domestic investment using GMM

LnDPI	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
LnDPI_1	0.150 (0.218)	0.601*** (0.232)	0.663*** (0.243)	0.244 (0.217)	0.646*** (0.186)	0.588*** (0.195)
SADC dummy	-0.054 (0.071)					
EAC dummy	0.377* (0.200)					
Tariffs		0.083* (0.043)				
Non-tariff		0.021 (0.055)				
Compliance costs of trade			0.003 (0.016)			
Regulatory trade barriers				0.033 (0.024)		
Black-market exchange rate					0.159*** (0.032)	

Freedom to trade internationally						0.291*** (0.071)
Log electric access	0.142 (0.142)	0.271* (0.155)	0.329** (0.159)	0.230* (0.138)	0.113 (0.131)	0.172 (0.139)
Log GDP growth	0.048* (0.028)	0.060 (0.037)	0.042 (0.037)	0.052* (0.029)	0.043 (0.033)	0.062* (0.034)
Log inflation	0.034 (0.030)	0.020 (0.037)	0.023 (0.039)	0.031 (0.031)	-0.40 (0.038)	-0.018 (0.038)
Log domestic credit	-0.652*** (0.164)	-0.958*** (0.212)	-0.964*** (0.215)	-0.666*** (0.164)	-0.659*** (0.171)	-0.826*** (0.181)
Lending interest rate	0.006 (0.004)	0.011* (0.005)	0.010* (0.005)	0.007 (0.004)	0.011** (0.004)	0.009* (0.005)
Rule of law	-0.123 (0.197)	0.053 (0.254)	0.011 (0.258)	-0.077 (0.202)	0.102 (0.232)	0.021 (0.237)
Observations	167	156	156	156	156	156

Note: Levels of significance: ***1%, **5% and * 10%. Standard errors are in parenthesis.

Table A6 – Average macro indicators in the different RECs (2000-2019)

	GDP (share of SSA)	GDP growth	GDP per capita	Population	Electricity access	Ease of doing business score
SADC	38.27	4.15	3122.8	28.3	66	59
COMESA	50.24	4.36	2667.9	53.5	71	55
EAC	12.14	5.13	691.4	25.5	46	59

Sources: WDI, 2024 and *Doing Business* reports, 2015-2019. SSA is Sub-Saharan Africa. Ease of doing business is from zero to 100, with 100 being the best performance.

Table A7 – Average institutional indicators in the different RECs, 2000-2019

	COMESA	SADC	EAC
Control of corruption	-0.756	-0.416	-1.030
Political stability	-0.830	-0.173	-1.376
Regulatory quality	-0.871	-0.473	-0.941
Rule of law	-0.762	-0.451	-1.076
Voice and accountability	-0.896	-0.262	-1.123
Government effectiveness	-0.872	-0.573	-1.163

Source: World Governance Indicators, 2025.

Table A8 – African countries and REC memberships

Country	REC Membership	Country	REC Membership
Algeria	AMU	Liberia	ECOWAS
Angola	ECCAS, SADC	Libya	AMU, CENSAD, COMESA
Benin	ECOWAS, CENSAD	Madagascar	COMESA, SADC
Botswana	SADC	Malawi	COMESA, SADC
Burkina Faso	CENSAD	Mali	CENSAD
Burundi	EAC, COMESA, ECCAS	Mauritania	AMU, CENSAD
Cabo Verde	ECOWAS	Mauritius	COMESA, SADC
Cameroon	ECCAS	Morocco	AMU, CENSAD
Central Africa Republic	CENSAD, ECCAS	Mozambique	SADC
Chad	CENSAD, ECCAS	Namibia	SADC
Comoros	CENSAD, COMESA, SADC	Niger	CENSAD
Congo, Democratic Republic	EAC, COMESA, SADC, ECCAS	Nigeria	ECOWAS, CENSAD
Congo Republic	ECCAS	Rwanda	EAC, COMESA, ECCAS
Cote d'Ivoire	ECOWAS, CENSAD	Sao Tome and Principe	ECCAS
Djibouti	IGAD, CENSAD, COMESA	Senegal	ECOWAS, CENSAD
Egypt	CENSAD, COMESA	Seychelles	COMESA, SADC
Equatorial Guinea	ECCAS	Sierra Leone	ECOWAS, CENSAD
Eritrea	IGAD, CENSAD, COMESA	Somalia	EAC, IGAD, COMESA, CENSAD
Eswatini	COMESA, SADC	South Africa	SADC
Ethiopia	IGAD, COMESA	South Sudan	EAC, IGAD
Gabon	ECCAS	Sudan	IGAD, CENSAD, COMESA
Gambia	ECOWAS, CENSAD	Tanzania	EAC, SADC
Ghana	ECOWAS, CENSAD	Togo	ECOWAS, CENSAD
Guinea	ECOWAS, CENSAD	Tunisia	AMU, CENSAD, COMESA
Guinea Bissau	ECOWAS, CENSAD	Uganda	EAC, IGAD, COMESA
Kenya	EAC, IGAD, COMESA	Zambia	COMESA, SADC
Lesotho	SADC	Zimbabwe	COMESA, SADC

Source: REC websites, 2025.

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