



Drivers for boosting
intra-African investment
flows towards Africa's
transformation



United Nations
Economic Commission for Africa

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Foreword

Africa is experiencing interesting times in an ever-changing and challenging global investment landscape. World investment flows increased rapidly, from approximately \$200 billion at the beginning of the 1990s to \$1.43 trillion in 2017.

Notwithstanding efforts being made to attract greater investment, Africa's foreign direct investment (FDI) inflows continued to decline in 2017, falling to \$42 billion from \$61 billion in 2015, and prospects remain modest amid low commodity prices.

Investment has become a leading source of external finance for many developing countries, including those in Africa. Notwithstanding the relative importance that investment is playing on the continent, African countries accounted only for 3.2 per cent of global FDI in 2017, compared with 5 per cent between 2012 and 2014.

Against this backdrop, and as resource mobilization becomes more critical for African countries amid the ambitious goals set out in the 2030 Agenda for Sustainable Development and the aspirations contained in Agenda 2063, it is important to have a better understanding of what type of investment could be harnessed from the continent if it is to achieve sustainable development.

This has become clear to our member States, as exemplified by their resolve to revise existing international investment agreements, which have not delivered in terms of attracting greater investment, but also in the context of the continental dialogue on investment that they have been driving through the African Union. Indeed, in 2013, member States expressed their desire to promote a dialogue on investment issues in the context of the eighth Ordinary Session of the Conference of African Ministers of Trade. In the spirit of advancing this ongoing dialogue, the Economic Commission for Africa (ECA) was recently mandated by the ministers to conduct a study on intra-African investment flows. ECA therefore initiated research on the drivers of intra-African investment in order to provide empirical evidence on how investment operates and what impact this has on economic transformation on the continent.

The aim of this study is therefore two-fold: to contribute to a better understanding of what drives investment within the continent and to provide an analytical basis for investment policies in Africa that may support the mobilization of investment that is transformative and developmental.



Vera Songwe

United Nations Under-Secretary-General and Executive Secretary of the Economic Commission for Africa

Executive summary

Global investment flows increased rapidly, from approximately \$200 billion at the beginning of the 1990s to \$1.43 trillion in 2017. The United Nations Conference on Trade and Development (UNCTAD) projected those flows to increase by 6 per cent, to \$1.51 trillion, in 2018.

Notwithstanding efforts to attract greater investment by African countries, foreign direct investment (FDI) flows to the continent continued to decline in 2017, falling to \$42 billion from \$61 billion in 2015 amid low commodity prices. African countries therefore accounted for an estimated value of 3.2 per cent of global FDI in 2017, compared with approximately 5 per cent during the period 2012-2014. Equally, Africa held 11.4 per cent of the worldwide FDI capital flows in 2016, making the continent the second fastest-growing destination, signaling scope for greater opportunities in investment diversification within the continent, which may support the structural transformation initiatives.

Moreover, the level of FDI inflows in Africa varies highly throughout countries. For example, FDI inflows remain unequally distributed throughout the continent. In 2016, only five countries (Angola, Egypt, Ethiopia, Ghana and Nigeria) received nearly 57 per cent of the continent's total inflows. This high level of heterogeneity observed at the national, sub regional and regional levels typically underlie a series of factors that need to be well understood. More fundamentally, this calls for a deeper analysis of what determines such flows to counter the root causes of decreasing investment and unlock its full potential in the continent.

Against this backdrop, the Economic Commission for Africa (ECA) has undertaken the present study on appropriate drivers for boosting intra-African investment towards Africa's transformation. This study responds to the outcomes of the continental investment dialogue of the African Union, which was initiated in 2013, and which includes a recent request to undertake further research on intra-African investment flows and mechanisms to promote intra-African investment (African Union, 2013 and 2016). The present study attempts to respond to the call of the African Union Conference of Ministers of Trade and inform the debate on how Africa may better harness intra-African investment for its structural transformation.

Overview of foreign direct investment trends in Africa

The continent remains one of the fastest-growing economic regions globally. Although current FDI levels appear to be retracting, investment has undoubtedly played a key role in buttressing this growth, especially as Africa has experienced significant increases of such flows since the turn of the century.¹ Contributing positive factors have included government efforts to end armed conflicts, improved macroeconomic conditions and reforms to create a better business climate.

Furthermore, the geographical distribution of FDI is relatively heterogeneous and therefore may also mask (or be masked by) regional trends. For example, North Africa's inward FDI amounted

¹ According to UNCTADstat, aggregate foreign direct investment inflows in 2000 amounted to \$10.9 billion and grew to a record high of \$77.5 billion in 2012, before decreasing to \$59.4 billion in 2016.

to \$14 billion in 2016, representing an 11 per cent year-on-year increase, while Morocco saw a significant drop, of 29 per cent. By contrast, East Africa registered the best relative improvement among all African regions, with \$7.1 billion in inward FDI in 2016, a 13 per cent jump compared with 2015. On the other hand, FDI flows to the United Republic of Tanzania and Kenya struggled, registering 15 and 36 per cent drops in FDI inflows, respectively, in 2016.

West Africa registered a year-on-year growth in FDI of 12 per cent, to \$11.4 billion, in 2016. Ghana recorded a 9 per cent improvement in FDI inflows, up to \$3.5 billion. Conversely, FDI flows to Côte d'Ivoire, Liberia and Senegal shrank slightly during the same period.

Southern Africa continued to be the most sought-after FDI destination on the continent, but suffered an 18 per cent drop, to \$21 billion in 2016. Although FDI flows to Malawi and South Africa strengthened somewhat, Angola and Mozambique were among the countries that saw their inward investment dwindle.

Due to political uncertainty, FDI to Central Africa dropped by 15 per cent, to \$5.2 billion, in 2016. While investment to Gabon and the Congo increased, the Democratic Republic of the Congo registered a decrease.

In the area of greenfield investment, the continent fell sharply in the value of newly announced projects, from \$94 billion in 2016 to \$41 billion in 2017.² In addition, there appears to be a noticeable sectoral shift away from the primary sector in favour of services, while sectors such as agriculture and natural resources continue to attract FDI in Africa.

Furthermore, energy and services emerge as sectors with significant investment potential in Africa. Financial services alone accounted for approximately 50 per cent of intra-African greenfield investment projects during the period 2003-2014.

Based on these overall trends, getting the FDI drivers right requires an analysis of intra-African investment that takes into account the African specificities and FDI disparities at national, regional and continental levels.

Drivers of intra-African investment: an empirical investigation

The present study contains a review and analysis of the drivers for boosting intra-African investment towards Africa's transformation and reconciles both the regional and continental perspectives. The study is intended to provide empirical evidence at the continental level on the impact of FDI on economic transformation and possible implications for regional integration.

The study considers FDI inflows between 49 African countries, on the basis of available investment data provided by UNCTAD during the period 2002-2014. Given the recent trends of FDI within Africa and considering the availability of bilateral investment data, the study develops a theoretical framework and empirical models, with a view to capturing the specific regional disparities and differences in its analysis.

² United Nations Conference on Trade and Development preliminary estimates.

Determinants of intra-African investment in Africa: a continental analysis

The results presented in the empirical part of this study indicate that trade openness, infrastructure and the performance of the logistics and business environment influence the attraction of investment within Africa. The positive impact of trade openness is consistent with prior ECA research showing that the benefits brought by enhanced intra-African trade through the African Continental Free Trade Area can offer better opportunities for industrialization. Furthermore, improvements in logistics, the business environment and trade cost could all enhance intra-African investment, beyond trade openness alone.

On the basis of existing evidence, the study underscores the potentially synergic relationship between investment and trade in Africa, if efforts are made to ensure that trade and investment are facilitated jointly and through relevant policies and regulation. Most important, if the African Continental Free Trade Area tariff liberalization is coupled with trade and investment facilitation measures, it could also boost intra-African investment, while promoting vertical production and economic diversification.

Estimates of this study also suggest that, for Africa, imports of manufactured goods and the share of industrial labour force have negative effects on intra-African investment. African economies should therefore promote their manufacturing and industrial capacities to boost intra-African investment through industrialization and better inclusion in regional value chains. The importance of industrialization is recognized in various continental initiatives, such as Agenda 2063, the Action Plan for Boosting Intra-African Trade and the Programme for Infrastructure Development in Africa. Furthermore, major gains of the African Continental Free Trade Area are forecasted to be in the industrial sector, which is consistent with Africa's aspirations to structurally transform its economy and achieve sustainable development.

As stated earlier, infrastructure development is key to explaining FDI. There are, however, potential crowding-out effects in the presence of domestic investment in this sector. To address this concern, investment must facilitate the introduction of new technologies and know-how with significant positive spillover effects and the strengthening public-private partnerships and blended finance targeting the development of transboundary technology and innovation projects. This implies that, if conditions are put in place to disseminate new technology, this can lead to spillover benefits from those African countries that are ahead of the innovation curve, for the benefit of the continent as a whole.

The study shows that education policy has a positive effect on intra-African investment. In particular, investing in girls' education plays a role in driving investment. The powerful corollary of this result is that inclusive social policies for promoting gender parity in gaining access to education could enhance the ability of African countries to attract more intra-African investment. Furthermore, taking into account that cross-border trade in Africa is characterized by women traders, the African Continental Free Trade Area could put in place concrete measures to facilitate such trade and thereby make it more inclusive.

The continental analysis in this study also reveals that investment within Africa is unstable and possibly explained by the political instability in some regions, such as North Africa and Central Africa. Lastly, and in conjunction with the observed investment instability, Africa's vulnerability to changes in the global economy highlighted in the study, such as the last financial crisis, reinforces the need for export diversification to raise Africa's resilience to external shocks.

Determinants of intra-African investment: a regional perspective

In addition to the results observed at the continental level, the study also considers the regional dimensions and identifies the channels through which intra-African investment has a positive impact on economic development and transformation.

The results outline the divergence in the drivers of the intra-African investment at the continental levels versus the subregional and regional economic community levels.

Results also indicate that exposure to regional and international trade appears to have mixed effects on intra-African investment in the subregions and regional economic communities. For example, in the North African and Intergovernmental Authority on Development (IGAD) subregions, trade openness has a positive impact on investment, which confirms trade-investment complementarities and is consistent with continental level results discussed earlier. For Southern Africa and the Southern African Development Community (SADC) countries, however, the effect is the exact opposite, which points to a type of market-seeking investment that substitutes for trade. Given this heterogeneity throughout African regions, the benefits linked to international and regional openness are conditional on the nature and type of FDI, the trade policy convenience and the degree of trade openness.

The results also reveal that an economically conducive environment is likely to be a magnet for intra-African investment. Trade facilitation and the reduction in trade-related costs appear to be key determinants of intra-African investment for North African and IGAD member States, according to the Logistics Performance Index. By contrast, the Index appears to negatively influence the intra-African investment for the Community of Sahelo-Saharan States (CEN-SAD) and Common Market of Eastern and Southern Africa (COMESA) member countries. Once again, investment in the latter two regional economic communities may be sensitive to trade conditions and, in the presence of reduced trade costs, will be substituted by trade flows.

A fundamental element to attract investment is building industrial capacity, which includes developing soft and hard infrastructure. The results demonstrate that supporting infrastructure could positively influence the intra-African investment for the Southern Africa, COMESA and SADC countries, as well as for the North African region.

Results also point to growth acting positively on intra-African investment inflows in East Africa, COMESA and IGAD. Intra-African investment there could be explained by their relative good economic performance that enabled a more efficient scale of production through economies of scale. The study also portrays a positive effect of gender parity in secondary school enrolment on intra-African investment inflows for the Southern African region, West Africa/Economic

Community of West African States (ECOWAS), CEN-SAD, and SADC. Moreover, the impact of secondary school level enrolment on intra-African FDI is negative. These results underscore that it is only an inclusive educational policy that can support greater intraregional investment, and this is consistent what has been observed at the continental level. Interestingly, the gender parity in these regions is not often lower than for the other regions mentioned as portraying the opposite effect. This result implies that the pro-intra-African investment impact of an enhanced gender parity is not explained by the lower parity in these countries. This impact should be investigated by further research in order to identify how some regions or regional economic communities that eliminate gender disparities in education would perceive a pro-intra-African investment impact.

In turn, official development assistance (ODA) has been found to play a positive and significant role in the intra-African investment flows to the Arab Maghreb Union and IGAD, possibly serving as a pull factor in co-financing development through investment sourced from the region (i.e., blended finance). ODA could also catalyse private finance through risk mitigation and promoting an enabling investment environment. This is important from a policy perspective for African countries, which need to expand the sources of their development finance in order to achieve the goals and aspirations contained in the 2030 Agenda and Agenda 2063.

Industrial sector development is yet another important driver for CEN-SAD and the Arab Maghreb Union in attracting intra-African FDI, while for COMESA and West Africa the relationship appears to be negative. In CEN-SAD and East Africa, higher manufactured imports appear to have deterred intra-African FDI, which is consistent with the continental results. This may point to the absence of industrial policies in support of domestic and regional value addition. Policies that promote the creation of value could help to reverse this trend. Coupled with investment policies that proactively support the development of an industrial and manufacturing sector, this could promote structural change in the production and trade structures for better inclusion into regional value chains.

Moreover, regional estimates also suggest that the size of the market is an important factor explaining intraregional investment in West Africa/ECOWAS, further emphasizing the importance of having a regional market to ensure higher return of scales. The results for this region further substantiate that multinational enterprises are more inclined to invest when the market is bigger. Furthermore, larger economies attract more market-seeking investment, and therefore boosting intra-African investment can also have a positive and dynamic effect on regional integration.

Lastly, the study also identifies several factors constraining intra-African investment. These include political uncertainty and inflation in the Arab Maghreb Union region and the financial crisis of 2007 in Southern Africa. Indeed, all regional estimates show that at least some component of the macroeconomic stability is an important driver for intra-African investment.

Conclusions and policy recommendations

The study provides evidence of the complementarities between trade and investment in Africa. Given the trade potential of the African Continental Free Trade Area and its likely implications for boosting intra-African trade and investment, there is a need for African countries to harness the area as a platform to boost intra-investment. Boosting intra-African trade through the area

is instrumental in increasing productivity, enhancing competitiveness and supporting economic growth. This needs to be accompanied, however, by investment regulation and policies that unlock the associated joint benefits of trade and investment growth. It is therefore relevant to develop common rules on investment in the context of the area to lock in the expected dynamic and static effects of trade and investment flows on the continent.

Moreover, there is strong evidence supporting the notion that greater industrial trade on the continent may further attract investment, thereby promoting opportunities for vertical integration and value addition, which, in turn, may address the binding supply side constraints that are impeding Africa's efforts to better integrate into regional and global value chains. The study corroborates that FDI openness promotes backward and forward integration. Boosting intra-African investment could also bolster the regional integration agenda at the regional economic community level and provide opportunities for alignment with the continental integration agenda. In this context, the African Continental Free Trade Area could resolve the challenges of multiple and overlapping regional economic community memberships.

The findings also point to the importance of a conducive business environment and trade logistics to attract greater intra-African investment. In addition, the study also confirms that boosting intra-African investment, especially in the industrial sector, could promote economic transformation and diversification. African countries wishing to promote economic growth by raising their total factor productivity must therefore pursue policies that improve the business environment and logistics performance.

Equally important is improving the quality of and access to education, given that doing so will raise the attractiveness of African economies, boost intra-African investment flows and promote associated technology and knowledge transfer. In this regard, it is critical to encourage the participation of women and men in the formal labour market to maximize the expected effects of intra-African investment through targeted and comprehensive strategies for young people and their employment, including at the regional level. In the context of the continental free trade area, this would also allow for greater flexibility and better planning of factor market mobility, an element that could also be incorporated into the negotiations on the movement of business persons to ensure that Africa generates jobs for the growing population of young people.

African Governments must further ensure that their investment laws are designed to spur national and regional investment. For example, investment laws should list priority investment sectors, including manufacturing and industrial ones. These sectors, rather than commodities, offer greater opportunities for regional integration and more strategic entry points at the higher levels of regional and global value chains.

The continent should also try to take advantage of transboundary investment opportunities, which benefit the subregions and regional economic communities. For example, if regulatory reforms are complemented by policies for public-private partnerships and blended finance that target investment for technology and innovation at the transboundary level, African countries could have much to gain from the spillover effects of intra-African investment.

Intra-African investment also has the potential to better integrate the continent's regional value chains by relocating labour-intensive activities to Africa, including in manufacturing. Further integration, trade openness and regulatory predictability would send a powerful message to the African business community to invest in such activities, given that such measures would ease African investors' entry into the continent and allow them to tap a larger goods, services and factor market, while contributing to industrial transformation.

Lastly, promoting the private sector is also a key challenge to sustaining and enhancing the attractiveness and competitiveness of African markets, and its contribution to economic growth and employment is crucial. The financial sector therefore has a key role to play in supporting the private sector. There is a need to develop proactive financial sector policies that can help to channel investment to small and medium-sized enterprises. The African Continental Free Trade Area can constitute a vehicle to achieve these goals, provided that common rules for financial services actively support small and medium-sized enterprise development on the continent.

1. Introduction

Recent research reveals that foreign direct investment (FDI) positively influences the inclusiveness and sustainability of development (World Bank, 2013; Alemu, 2016; Ibukun and Aremo, 2017; McHenry and others, 2017) through various channels. These include the improvement in export competitiveness and productivity, job creation, innovation, capital cost reduction and the transfer of skills. In this regard, further efforts are also required to foster sustainable development through investment by promoting responsible business practices, increasing the capacity of the domestic and public sectors and reforming framework conditions for investment.

In view of the changing global environment for financing development, FDI could be a major stimulus of inclusive growth for African countries. Indeed, FDI is a relatively stable form of investment, compared with other sources of capital because it is less vulnerable to changes in market conditions and financial crises. FDI is also increasingly viewed as an opportunity to bridge existing financing gaps in developing countries, given that it has become a leading source of external finance (Smith, 1997; Quazi, 2007), including in Africa.

Global investment flows rapidly increased, from approximately \$200 billion at the beginning of the 1990s to more than \$1.43 trillion in 2017.³ Africa has followed a similar pattern, with FDI inflows increasing more than four-fold, from \$10.9 billion in 2000 to \$42 billion in 2017. The share of Africa in global FDI inflows, however, was only 3.2 per cent in 2017.⁴

In order for Africa to achieve its twin goals of inclusive growth and structural transformation (Stojčić and Orlić, 2016), and given the limited access to domestic financial resources that many individual African countries encounter, a boost in investment flows is necessary to adequately finance Africa's structural transformation, both from within the continent and beyond. The Economic Commission for Africa (ECA) defines structural transformation as a fundamental change in the economic and social structures that drive inclusive and sustainable development. African structural transformation is critical to achieving productivity improvements, sustainable growth and poverty reduction.

In particular, intra-African investment could support the achievement of these objectives by boosting intra-African trade and its industrial content. Intra-African investment could also play a crucial role in increasing the actual levels of investment in Africa, and contribute to improving its global participation in FDI inflows. The largest source of investment to Africa remains the United States of America, which, in 2016, held 13.5 per cent of inward investment projects in Africa. The top regional investor in Africa is West Europe, with 37.7 per cent of FDI projects. Investment from the Asia-Pacific region is also prominent (20 per cent of projects), driven by China and Japan. While intra-African investment is the fifth-largest source of FDI, its share of projects was 15.5 per cent of FDI projects in 2016. Nevertheless, Africa held 11.4 per cent of the worldwide FDI capital flows in 2016, making the continent the second fastest-growing destination, which further signal the scope for greater opportunities in investment diversification in support of the structural

³ United Nations Conference on Trade and Development preliminary estimates.

⁴ Calculation based on preliminary estimates in United Nations Conference on Trade and Development (2018).

transformation initiatives and away from traditional commodity-based production structures. Indeed, FDI in non-traditional sectors could be a catalyst for economic diversification by supporting African economies' efforts to reduce their dependence on natural resources (Fonchamnyo, 2017; Anyanwu and Yaméogo, 2015) through its export diversification effect.

Ongoing regional integration efforts such as the progress being made towards the creation of the African Continental Free Trade Area also promise to further boost intra-African investment. Karingi and Mevel (2012) demonstrated that the area has the potential to boost intra-African trade by 52.3 per cent between 2010 and 2022, which currently stands at only 16.3 per cent of the total of Africa's trade (Economic Commission for Africa, 2015). Similarly, African investment is directed in large part to regions outside the continent, which could be explained in part by the divergence in the integration dynamics at the continental and regional levels. It is therefore critical to identify and better understand the intra-African investment drivers in order to support the regional integration efforts and thus better target these flows within the continent, especially through initiatives such as the African Continental Free Trade Area.

Among some of the efforts being made at the continental level to support greater FDI inflows is the Pan-African Code of Investment. The overarching objective of the Code is to attain more inclusive growth through the promotion and protection of investment, leading not only to equality of treatment for investors irrespective of their nationality, but also to the reduction in investment barriers in support of greater investment attraction. The Code has been recently adopted by the African Union ministers of finance as a non-binding guiding instrument. They further recommended that the Code be presented to the ministers of trade and industry for their consideration, given that the latter are involved in the African Continental Free Trade Area negotiations (African Union, 2017). The Code could therefore become a platform for the area negotiations envisaged on investment and for the harmonization of investment regulations throughout countries, regions and subregions. In the light of the progress made on the Code and the proposed area negotiations on investment, African countries could have an opportunity to bring in greater coherence throughout the existing layers of investment regulation and thereby promote greater intra-Africa investment and FDI from outside the continent.

Given the immense potential of intra-African investment as a source of capital for financing structural transformation and development in Africa, a better understanding of what determines this type of investment is required. This calls for applied research to identify the key drivers of intra-African investment inflows.

Against this backdrop, this study is aimed at analysing the drivers of intra-African investment inflows at the continental and regional levels. The empirical part of the study takes into account the individual and regional characteristics and the differences on the continent to assess the determinants of intra-African investment. In order to achieve this, the study features panel time series regressions for the period 2002-2014 by applying generalized method of moments techniques on bilateral investment flows among 49 African countries. The study further provides policy-based recommendations on the basis of its empirical findings, in support of better investment policies and regulations that may promote greater intra-African investment.

This study is structured as follows: section 2 provides an overview of the theoretical and empirical literature on FDI drivers in Africa and beyond; section 3 features a discussion of recent trends in African FDI inflows, both at the continental and regional levels; section 4 presents the empirical estimation used and data sources and variables, prior to an analysis of the results; and section 5 provides for conclusions and policy recommendations on the basis of the research findings.

2. Main drivers of foreign direct investment in Africa: literature review

FDI is commonly identified with the expansion of a firm's productive capacities beyond its domestic boundaries, with a view to sustaining a lasting interest and a degree of ownership and control of what it has invested beyond national confines. Direct investment differs substantially from indirect investment, such as foreign portfolio investment. While foreign portfolio investment implies the transfer of financial capital only, FDI involves the transfer of intermediated products or an assets package, including financial capital, entrepreneurship, technology, incentives structure, access to markets, management and organizational expertise, values and cultural standards (Tavares-Lehmann and others, 2016).

Defining FDI is not an easy task, given that there is a varied and sometimes differing views on this type of international capital flow. Among some of the most recent definitions of FDI is one proposed by the World Bank (2014):

Foreign direct investments are the net inflows of investment to acquire a lasting management interest (10 per cent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.

This conceptualization of FDI resonates with one of the definitions of FDI considered to be a benchmark, and which is among the most commonly used today. Accordingly, the definition of the Organization for Economic Cooperation and Development (OECD) states that FDI is "a category of cross-border investment made by a resident in one economy (the direct investor) with the objective of establishing a lasting interest in an enterprise (the direct investment enterprise) that is resident in an economy other than that of the direct investor". When qualifying the notion of a lasting interest, it involves at least a 10 per cent of the voting power of the FDI enterprise. (Organization for Economic Cooperation and Development, 2008).

Most definitions, such as those of the World Bank and OECD, take into account an asset-based approach towards investment and place an emphasis on firm operations overseas as the main conduit for FDI. They, often fail, however, to capture the additional value that FDI is often expected to generate and very difficult to quantify.

Nevertheless, it is this additional value and positive externalities associated with FDI that are most sought after. Investment promotion policies have been a top policy priority for many Governments in order to attract this type of investment and its related package of potential benefits over time. The literature on FDI, however, is very varied and inconclusive on what is required to adequately attract such capital flows. The following subsections provide an overview of some of the major theoretical and empirical contributions on what drives and determines FDI.

2.1 Theoretical literature on foreign direct investment drivers

Several theories have been developed to explain what drives or determines FDI. The underpinnings of most of the more mainstream FDI theories relate to the incentives that multinational enterprises have in order to extend their activities and operations beyond their country of origin. These theories are, in general, referred to in the literature as the theories of FDI or theory of the multinational enterprises.⁵

Beyond these theories, some of which have been longstanding, other strands of theory focus on less conventional approaches, such as the portfolio theory and more modern approaches in literature that go beyond the static effects of FDI and look instead at FDI dynamics and impact. The present subsection provides a general overview of the rich and varied FDI theory, covering some of the main contributions and with a view to highlighting what can serve as a theoretical basis for understanding FDI drivers.

2.1.1 Traditional foreign direct investment theories

Among the traditional theories that have been longstanding is the internationalization theories/ transaction cost. This theory, developed initially by Coase (1937), advocates that a firm will grow driven mainly by the expected profitability, this being determined by the level of transaction costs. Companies that diversify by managing exchange transactions for new products or ceasing transactions for their costly old products respond to this rationale. This approach has evolved over time to include also other factors of production, such as capital. Williamson (1975) centred the transaction cost-minimizing approach on concepts such as the agents' bounded rationality, buyer uncertainty and the assets' specificities. The central argument of this approach is that the transaction costs depend on the method of organization selected to organize it.

Another well-known theory is based on industrial organization principles. Accordingly, Hymer (1968,1970) and Kindelberger (1969) developed the market structure and industrial organization theories, respectively. These theories advocate that multinational enterprises move assets across borders in order to overcome informational and operational deficiencies relating to domestic competitors.

Hymer (1976) explained in his market structure theory that FDI decisions rely on two factors, namely, market imperfections and firm-specific competitive advantages. Given the prevalence of market imperfections, firms concentrate their monopoly power in order to influence the market. This results in different computational frameworks, namely, firms that sell their products in the same markets (horizontal competition) or those that trade with one other in various countries (vertical competition). Under this framework, some companies could have a specific production advantage in foreign markets, such as knowledge, cheaper factors of production or distribution networks. Hymer (1976) further argued that a firm's decision to invest could be influenced by two factors, namely, barriers linked to their nationality (and which give rise to information costs) and risks of expropriation and exchange rates.

⁵ For a summary of the various theoretical underpinnings of foreign direct investment, see Páez (2011).

Kindelberger (1969), in turn, sustained that companies grew as their markets grew and that multinational enterprises are a result of the expansion of a firm. According to Kindelberger, FDI is an international movement of capital only and is due mainly to imperfect competition on the world market. He also argued that the source of market power is the monopolistic advantage and not the firm-specific advantage as supported by Hymer (1976).

Another mainstream theory is the product cycle theory, with its most important references, namely, Posner (1961) and Vernon (1961), which recognizes that innovation supports FDI on the basis of technology and enabling knowledge transfers. The theory is attributed mainly to Vernon (1961). In that pioneering research, Vernon indicated that, at an initial stage of the product cycle, the firm's incentive to launch new products would determine the host country (location), factors costs and external economies. Indeed, the firm's closeness to the targeted markets facilitates the flow and speed of information. Given the lower market uncertainty, in the second stage of the product cycle, the firm could easily expand its outputs to benefit from economies of scale. The choice of import market is based on its potential production costs and the sum of the marginal production and transport costs. The prospective costs could be defined by the differences in technology levels and factor costs of the home and foreign market. The third stage of the cycle is characterized by highly standardized products, which enables the production relocation to less developed countries. In this case, the location will be chosen on the basis of the closeness to input sources and input costs.

In this line, Linder (1961) demonstrated the importance of domestic demand as an incentive for multinational enterprises to innovate. The product cycle literature considers that trade-based models can be a reference for the multinational enterprise theory, given that they underpin the role of innovations in developing new trade patterns (Dunning,1973).

Vernon's model had several revisions (Vernon, 1974 and 1979) that emphasize the dynamic interaction between the technological revolution and the worldwide production under the assumption of international oligopolistic structures. The product cycle theory has provided the framework for several researchers such as Kojima (1973, 1975 and 1985), Hirsch (1976) and Helpman and others (2004), among others.

Kojima (1973, 1975 and 1985) combined direct investment theories with integrated trade theories and asserted that FDI was incremental to enhance the worldwide efficiency of the factor markets. He advocated that market orientation, labour and resource were the main drivers of FDI. Helpman and others (2004) outlined that a firm chooses between serving the domestic market, exporting or investing abroad. They demonstrated that the most productive firm would invest in foreign market if the benefits linked to avoiding transport costs were superior to the costs of keeping facilities overseas.

Lastly, among the most documented FDI theories is the "eclectic paradigm", initially developed by Dunning (1977 and 1993). This theory reconciles elements of various one on multinational enterprises into an operational framework that attempts to investigate the investment drivers, which has been enriched by numerous contributors and authors over time.

The “eclectic paradigm”, or ownership, location and internalization framework, assumes that firms invest abroad searching for three type of benefits, namely, ownership, location and internalization advantages, as defined as follows:

- a) Ownership-associated benefits enable a firm to compete with others in the markets by gaining access to and exploiting and trading available national resources and resource-based products. These benefits are due to the firm's capacity to synchronize complementary activities and its capacity to exploit differences among countries;
- b) Location-linked advantages include those rendering the selected foreign country attractive for FDI. It includes natural endowment, labour advantage, gains in trade costs, trade obstacles that limit imports and strategic benefits through intangible assets. In these cases, FDI is horizontal because it supplies the local market of the recipient country through an affiliate. Moreover, location benefits may be present owing to the discrepancies among government regulations, cultural determinants, macroeconomic stability and transport cost;
- c) Internalization associated benefits result from exploiting imperfections in external markets comprising a decrease in transaction costs and uncertainty. The objective is to lessen government-generated discrepancies (i.e., subsidies, foreign exchange control and tariffs) and to produce knowledge more efficiently. Kinda (2010), Pantelidis and Nikolopoulos (2008) and Sekkat and Véganzones-Varoudakis (2007) demonstrated that, under these conditions, delocalization of a portion or all the production process reduces the benefits costs (hence, the rationale for vertical FDI).

Dunning (1993) further defined four incentives categories or typologies of FDI: (a) efficiency seeking or vertical FDI that is aimed at benefiting from lower labour costs; (b) market-seeking or horizontal FDI that enables access to the host country domestic market; (c) resource-seeking FDI that ensures the access to physical infrastructure, a labour force and resources or raw materials; and (d) strategic asset-seeking FDI that favours not only access to advanced technology, innovation and research and development, but also potential opportunities that may result from being a first comer or from positioning in a market.

Dunning (1993) and Markusen and Maskus (2002) advocated that the effect of trade openness on the FDI inflows depended on the incentive for FDI activities. From that perspective, Anyanwu (2012) argued that trade openness could have a negative impact on market-seeking FDI inflows owing to the trade restrictions (tariff-jumping theory). Indeed, trade openness encourages export-oriented FDI, while tariff-jumping FDI enables the multinational enterprise to overcome a trade restriction by locating the production in the host market. This behaviour reduces the welfare benefits relative to trade protection (Blonigen and others, 2004).

Portfolio theory versus traditional foreign direct investment theory

Among the less traditional approaches to FDI is the portfolio theory, which explains the behaviour of individuals or firms managing financial assets and seeking the highest possible risk-adjusted net return (Markowitz, 1959). In other words, many individuals and firms engage in foreign portfolio investment by purchasing bonds, foreign stock and other foreign financial instruments.

Dunning (1973) remarked that the portfolio theory explained FDI in part. The main critique against portfolio theory is that it ignores that FDI does not imply changes in ownership. This theory advocates that FDI involves the transfer of technology, expertise and factor inputs other than money capital and that it depends on the relative profitability of the use of these resources in countries. Agarwal (1980) remarked that multinational enterprises do not essentially seek higher profits on FDI than on local investment, and hence they are not always profit maximizers. Taveira (1984) further demonstrated that the portfolio hypothesis could not explain the divergences between manufacturing tendencies to invest in a foreign country.

Another less traditional or popularized theory is that of Akamatsu (1962). He developed the flying geese theory in order to explain the chronological growth in manufacturing industries in developing economies that would eventually lead to FDI. In that sense, the flying geese model placed an emphasis on the catching-up process of industrialization by latecomer economies. The theory considers three dimensions: the inter-industry dimension, the intra-industry dimension and the international division of labour dimension. The first dimension includes the sequential development of industries in a developing economy through the diversification and upgrade from simple to more sophisticated products or from consumer goods to capital goods. The second element refers to the product cycle in a given developing economy and stipulates that the economy initially imports a good, then combines production with imports and finally exports that good. The third dimension is the relocation of industries from advanced to developing countries, which brings FDI into the latter countries.

2.1.2 Modern foreign direct investment theories

Some of the more modern or recent FDI theories that have gained currency look at FDI in today's world, which is marked especially by delocalized production structures and the prevalence of cross-border networks. Beyond the tangible and measurable factors that may motivate a firm to operate, some of the theoretical literature also tries to explain push and pull factors that reveal complex and qualitative dimensions, as exemplified below.

Mathews (2002, 2006a and 2006b) developed the linkage, leverage and learning framework of firm internationalization in order to explain the emergence of "dragon multinationals" such as Brazil, China and India. This framework complements the ownership, location and internalization insights by pinpointing the strategic necessities of latecomer firms that could succeed in their internationalization efforts if they develop leverage, linkage and learning aptitudes.

The linkage, leverage and learning framework suggests that multinational enterprises could leverage prior linkages established in the worldwide economy using practical learning within the interconnected global network. Indeed, the latecomer firms do not internationalize on the basis of their skills and resources but rather by leveraging resources from existing players (i.e., market positions, technologies and assets) and doing so repetitively. Firms could therefore catch up to the existing player by becoming active in the global market. Mathews (2017) advocated that it was elementary to differentiate between the learning in latecomers that is driven by autonomous skills, linkage and leverage.

Stage theory or model

Another stream of thinking on FDI was developed by Johanson and Vahlne (1977 and 1990) and Johanson and Weidersheim (1975). Based on empirical evidence of the internationalization process of firms, these researches demonstrated that firms progressively internationalize their activities through their worldwide involvement and experiential knowledge. Internalization is therefore defined as a process of a progressive knowledge-gaining and increasing resource commitment. Within this framework, increased international involvement will enhance the multinational enterprises' experimental knowledge and learning.

Johanson and Vahlne (1977 and 1990) outlined that the companies could purchase "objective" knowledge of foreign countries but not "experiential" knowledge that can be gained only through direct experience. In their Uppsala internationalization stages model, they also demonstrated that multinational enterprises should acquire experiential knowledge in order to exploit market opportunities and overcome market uncertainty. The Uppsala model relies on four concepts, namely, market commitment, market knowledge, current activities and commitment decisions.

Literature providing theoretical underpinnings to foreign direct investment drivers

A newer strand of literature suggests a two-factor classification of FDI drivers, namely, the external (or push) factors of the FDI recipients, such as the economic conditions in the host countries, and the internal (or pull) factors linked to the macroeconomic and institutional environment among others, as well as the host country's comparative advantages, such as infrastructure and skilled labour (Tapsoba, 2012; Karakaplan and others, 2005). Anyanwu and Yaméogo (2015) proposed a third factor, namely, the institutional factor, which includes dimensions such as corruption, political risk, intellectual property rights and bureaucracy.

Fedderke and Romm (2006) suggested dividing the forces driving FDI into either policy or non-policy determinants. The policy determinants may comprise infrastructure, corporate tax rates, direct FDI restrictions, trade openness, labour market arrangements, product-market regulation and trade barriers. According to Liu and others (2017), the non-policy determinants could include political and economic stability, factor endowments, market size of the host country and distance or geographical location of the host country.

An important factor often considered in the literature on FDI enablers is the natural resources endowment. Indeed, the abundance of natural resources in a country is thought to raise its attractiveness for FDI inflows. Fiodendji (2016) showed that the endowment in natural resources influenced positively the FDI inflows to Africa during the period 1984-2007. Onyeiwu and Shrestha (2005) demonstrated that natural resources-endowed African countries attracted more FDI inflows.⁶ Anyanwu (2012) and Mohamed and Sidiropoulos (2010) found similar results for the East and Southern African subregions and Middle East and North African countries, respectively.⁷

Other policy factors that are gradually being considered in the investment literature include gender dimensions. Gender disparities are among the top policy challenges facing countries globally and

⁶ These results do not include North African countries.

⁷ In this study, the use of generalized method of moments estimations rule out the use of a variable that captures the African endowment in natural resources because of multicollinearity consideration. See section 4 for further explanations.

Africa in particular. A valid assumption being made in the literature considers that, by reducing inequalities between men and women in access to education and employment, a country could be in a better position to harness FDI through more enhanced and skilled human capital. Abu-Ghaida and Klasen (2004), however, remarked that the effect of gender equality in education was likely to vary from one country to another. Interestingly, Anyanwu (2016) found that gender equality in employment was associated with higher FDI inflows in Africa. Seguino (2000) showed that women's education exerted a stronger impact on growth over time than men's education, which ultimately is an important pull factor for FDI.

It is widely recognized and documented in the literature that FDI inflows can contribute to economic growth through various channels (Woo, 2009; Agboloyor and others, 2014; John, 2016, among others). In particular, FDI inflows are shown to have a differentiated and developmental impact in Africa (Zekarias, 2016). In this regard, Tomi and Diderot (2015) demonstrated that growth and FDI inflows in West African Monetary Union countries have a long-run bidirectional relationship, that is to say, FDI inflows foster and are fostered by economic growth. These growth benefits associated with FDI inflows, however, requires the existence of absorptive capacities on behalf of the host countries receiving them.

There are two reasons why FDI inflows are a vehicle of economic growth. First, the presence of multinational enterprises generates positive externalities in host countries through several channels, namely, enhanced international trade, enhanced human capital, the transfer of technology and know-how and strengthening domestic companies. Second, FDI inflows can fill the savings gap and thus help host countries to finance development projects, including in sectors such as infrastructure (Tomi and Diderot, 2015).

Likewise, FDI inflows constitute an important channel for structural transformation of exports in the long term by supporting export sophistication (i.e., through greater value addition into export products) and associated positive spillovers into the economy (e.g., through technology and knowledge transfer and dissemination). With the aim of initiating the FDI-driven structural transformation of exports, developing countries should strengthen their absorptive capacity and consider acquiring technological transfer from FDI (Stojčić and Orlić, 2016). Structural transformation impacts depend on the countries' capacity to channel FDI inflows into industries and manufacturing in particular. This will increase the productivity of the labour force and thus the value added of those industries (Takii, 2005).

The literature also elaborates on both the static (direct) and dynamics (indirect) effects of FDI on growth. Direct effects operate through FDI as a cumulative production input (e.g., capital goods imports). FDI can also exert a spillover effect from the relatively more developed countries (or subregions or regional economic communities) on total factor productivity growth. The expected benefits of inward FDI is also linked to the dynamic gains of trade openness. It relies on the ability of multinational enterprises to transfer technology, knowledge or know-how to the host countries. The analysis of the spatial pattern of FDI spillover effects therefore contributes to a more comprehensive understanding of the role of FDI in an economy (Jiang, 2014).

Relationship between trade and investment: complementarity or substitution?

From a theoretical perspective, the internalization theory, the eclectic paradigm and the general equilibrium trade models that investigate horizontal multinational enterprises advocate or presume a substitution relationship between international trade and FDI. Nevertheless, the models of vertical FDI sustain a complementarity relationship between both trade and FDI (Forte, 2004). From an empirical perspective, the literature is inconclusive on the nature of the FDI-trade interaction. Whether FDI complements or substitutes trade has its own arguments.

For example, on the basis of his trade model, Helpman (1984) demonstrated that FDI could be a complement to trade on condition that the relative remuneration and endowment of the production factors are different among countries. Multinational enterprises should therefore fragment their production stages by locating skilled labour-intensive activities in industrialized economies and unskilled labour-intensive activities in economies with low wages. In that regard, Borensztein and others (1998) found that FDI exerted a positive effect on domestic investment. Similarly, greater trade openness lessens the cost of credit and therefore increases international trade. More recently, Bouras and Raggad (2015) demonstrated a ripple effect between FDI and exports at the macroeconomic level for both manufactured and non-manufacturing sectors.

By contrast, horizontal FDI implies a substitution relation between FDI and trade. Indeed, horizontal FDI could incite multinational enterprises to “jump” trade restrictions through the location of similar activities in diverse markets (Brainard, 1997; Ma and others, 2000). Moreover, the presence of trade barriers can encourage FDI to overcome trade-related constraints if bypassed through the localization of activities through investment (Caves, 1996). From that perspective, Belderbos and Sleuwaegen (1998) demonstrated that tariff-jumping investment had substituted for export from Japan in the European good markets.

In conclusion, the debate on the complementary versus substitution between FDI and trade cannot be settled theoretically. As demonstrated by some of the above studies, the nature of this relationship is rather an empirical issue to be addressed on a case-by-case analysis.

2.2 Empirical literature on foreign direct investment drivers

There is abundant empirical literature on FDI and its drivers. Blonigen and Piger (2014) provided a review of FDI determinants. They showed that traditional gravity variables, such as cultural distance factors, relative labour endowments and trade agreements, appeared to be the main explanatory parameters of FDI. Erdogan and Unver (2015) investigated FDI determinants for 88 countries using a static and dynamic panel data analysis and found that market capitalization, market size, credit to private sector, corruption, gross domestic product (GDP) growth, unemployment rate, GDP per capita, the inflation rate and labour force growth exerted a statistically significant positive impact on FDI inflows during the period 1985–2011.

From a regional perspective, Sánchez-Martín and others (2014) demonstrated that trade openness, government stability, a negative balance of payment, maintenance of low short-term debt levels and low expropriation risk positively influenced FDI inflows to Latin America during the period

1990–2010. For the European region, and using a factor analysis-based model, Villaverde and Maza (2015) found that competitiveness, labour market characteristics, technological progress and economic potential were the main drivers of FDI during the period 2000–2006. Using data from Asia, Nagano (2013) demonstrated that decreases in host-country corporate tax rates, per capita income and increases in population size increased FDI inflows.

Applied specifically to Africa, recent research has shown that trade openness portrays a positive relationship with FDI inflows (e.g., Anyanwu and Yaméogo, 2015; Bartels and others, 2009). There is, however, no consensus on variable selection as specified by Blonigen and Piger (2014). The literature is still inconclusive on some of the potential drivers of FDI in Africa, hence the importance of widening the analytical base and empirical evidence on FDI on the continent.

Anyanwu and Yaméogo (2015) provided a comprehensive framework to analyse the factors that drive FDI by looking at regional heterogeneity among African countries. They proposed a conceptual framework to determine source of FDI for five regions of Africa during the period 1970–2010. Using standard econometric techniques, namely, ordinary least squares and generalized method of moments, they demonstrated that there was a positive agglomeration effect in all regions, except for Central Africa. In addition, they found a negative relationship between FDI inflows and GDP per capita in all African regions, but their research showed that a U-shaped relationship was observed in Central, North and West Africa. Trade openness was also found to have a positive relationship with FDI inflows in all the five regions, except in East Africa. This result was also confirmed by Bartels and others (2009), who showed that openness and international trade agreements were important FDI drivers. Although Anyanwu (2012) found similar results, there is no consensus on the impact of trade openness as an explanatory variable of FDI inflows, given that other authors, such as Kudaisi (2014), who investigated the determinants of FDI in 16 West African countries, concluded that trade openness had a negative relationship with FDI inflows to the subregion.

Furthermore, intra-African investment appears to be selective, given that it is heavily concentrated in the services sector. The bulk of investment in services in Africa, especially in finance, is intraregional, reflecting several factors driving and facilitating regional financial firms to expand on the continent rather than beyond. Intra-African FDI has played a vital role in driving Africa's burgeoning financial sector, especially in banking retail services and insurance (Krüger and Strauss, 2015). Indeed, financial services accounted for some 50 per cent of intra-African greenfield investment projects during the period 2003–2014. This evidence appears to further suggest that openness in services and services trade could help Africa to attract the much-needed investment to finance its structural transformation and development.

In particular, openness to FDI, especially infrastructure-related FDI, has been demonstrated to be a key vehicle of global value chain participation in the existing literature (International Monetary Fund, 2017; Organization for Economic Cooperation and Development, 2013; United Nations Conference on Trade and Development, 2013). Linking to global value chains can support developing countries in achieving greater participation and insertion into the world economy and can play an important role in supporting their economic growth and structural transformation,

especially if they are able to move up the chains.⁸ In addition, and more interestingly, economies with the fastest-growing global value chain participation have GDP per capita growth rates some 2 percentage points above the average (Organization for Economic Cooperation and Development, World Trade Organization and World Bank Group, 2014).

From an African perspective, what should be underlined is that trade facilitation gains, coupled with the likely effect of the full implementation of the African Continental Free Trade Area, could have important benefits in terms of insertion into regional and global value chains (Economic Commission for Africa, 2015). These trade facilitation gains are likely to facilitate complementarities between trade and investment, especially if market-seeking FDI is attracted into the African Continental Free Trade Area to service export markets on the continent.

Morisset (2000) found that African countries could catalyse FDI that is not based on natural resources or the size of the domestic market by enhancing their business climate. In his econometric analysis of 29 African countries with cross sectional and panel data during the period 1990-1997, he found that more trade openness and GDP growth could improve the business climate. In the same vein, Asiedu (2006) demonstrated that African countries that are endowed with natural resources or have large markets would attract more FDI. She also provided evidence that good infrastructure, low inflation and efficient legal system promoted FDI, while corruption and political instability had a negative effect on the flow of FDI to the continent.⁹

Mijiyawa (2015) demonstrated that the main FDI drivers in Africa are the country size, the degree of openness, political stability, the return on investment and the persistence of FDI inflows. These results are based on five-year panel data and the system-generalized method of moments technique for 53 African countries during the period 1970–2009. In turn, factors such as political and macroeconomic instability, low growth, weak infrastructure, poor governance, an unfriendly regulatory environment and ill-conceived investment promotion strategies were identified by Dupasquier and Osakwe (2006) as responsible for the poor FDI record in Africa. They also demonstrated that countries in the region should pay more attention to the improvement in relations with existing investors and offered them incentives to assist in marketing domestic investment opportunities to potential foreign investors. Bokpin (2017) further demonstrated that governance and institution policy prescriptions could reduce the negative impact of FDI flows on environment sustainability.

Kaplinsky and Morris (2009) found that the developmental impact of Chinese FDI in Africa depended on the quality of governance of African Governments. Similarly, Benjamin (2012) showed that improving the business environment in sub-Saharan Africa increased FDI flows into the host country and suggested that reforms aimed at attracting FDI needed to improve governance, create efficient infrastructure, reduce corruption, ensure respect for laws and eliminate sociopolitical violence.

8 Structural transformation is conceived as a shifting of gears from lower to higher value-added activities within and across economic sectors. This is best demonstrated when countries are able to move from the lower end of global value chains, in which activities are characteristically extractive and in which there is little value addition, to activities higher up the value chain, which have more advanced and sophisticated production processes, implying a greater adding of value to the final good or services being produced.

9 Both these empirical studies exclude North African countries.

From a macroeconomic perspective, Anyanwu and Yaméogo (2015) also found that monetary unions attracted greater FDI to Central and West Africa, which could be explained by nominal convergence as a determinant of attractiveness of FDI. Lastly, and not surprisingly, political stability also had a positive impact. Macroeconomic stability appears to also be an important driver for FDI, as Naude and Krugell (2007) demonstrated. Using a cross-country econometric approach, they concluded that government consumption, the inflation rate, investment, governance and initial literacy were important determinants.

Similar findings were proposed by Hailu (2010). Using a data set of 45 countries during the period 1980-2007, he demonstrated that natural resources, labour quality, trade openness, market accession and infrastructure conditions had a positive and significant effect on the flow of FDI into the continent. From the same perspective, Bartels and others (2009), using principal components factor analysis, demonstrated that a sound investment climate and transparent legal framework appeared to be the main determinants of FDI.

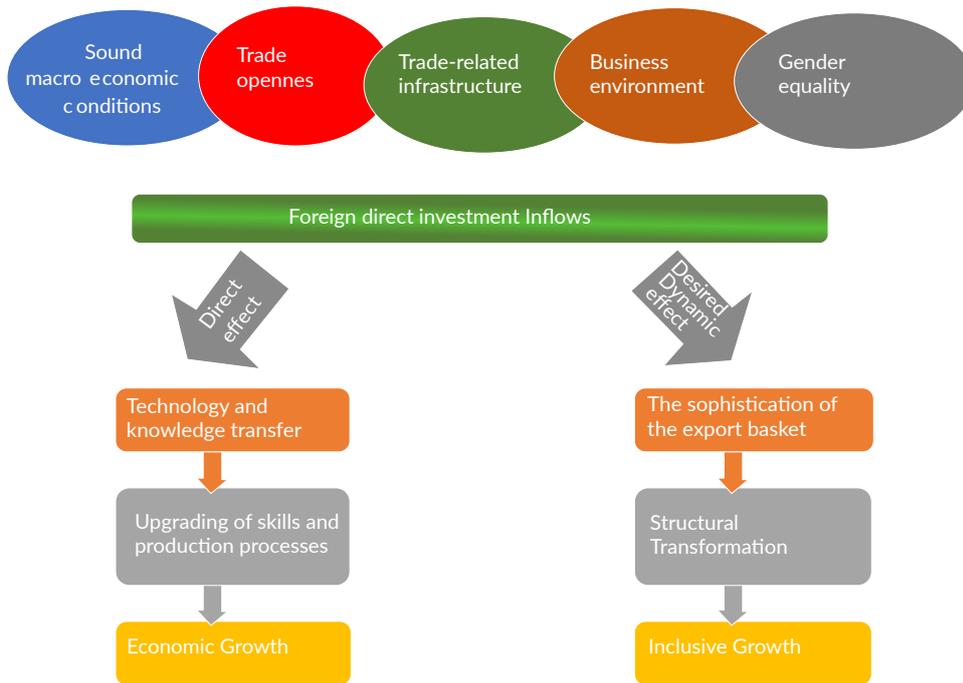
Lastly, Yasin (2005) investigated the relationship between ODA and FDI flow to sub-Saharan African countries using panel data from 11 African countries¹⁰ during the period 1990–2003. He provided evidence that ODA had a positive and significant effect on the flow of FDI to the subregion, which is a strong point in favour of supporting initiatives that promote mixed or blended financing, given that ODA can serve as a pull factor in co-financing development through other sources, such as investment from the region.

This general overview clearly indicates that the bulk of the empirical literature has tried to explain in large part the determinants of FDI, with mixed results. Some of the more innovative research, such as by Anyanwu and Yaméogo (2015), provided a regional perspective for Africa. One size does not fit all, however, and it is important to reconcile national, regional and continental perspectives to be in better position to understand the key determinants of FDI in the African context.

From a policy perspective, it is of utmost importance to gain a better understanding of the channels through which FDI has a positive impact on economic development and transformation. On the basis of the evidence documented in both the theoretical and empirical literature, the conceptual framework (see figure I) below attempts to capture the channels through which FDI drivers may lead to greater investment and generate both expected static and dynamic spillover effects that may ultimately engender structural transformation and economic growth.

¹⁰ This group does not include North African countries.

Figure I Conceptual framework of foreign direct investment drivers and impacts



Source: Economic Commission for Africa.

For example, and as discussed earlier, the literature shows that FDI inflows have the potential to foster economic growth through two channels, namely, technology and knowledge transfer, as well as through a greater sophistication of exports. Through the first channel, if FDI facilitates technology and skills transfer, local firms will benefit from the dissemination and uptake of newly acquired technologies and knowledge. This will lead to a process of the upgrading of the firms' skills and know-how, as well as adoption of new and more updated production processes. In the long run, these spillover effects will have a direct impact on output and productivity, expanding the production possibility curve and thereby leading to greater growth.

Through the second channel, FDI has the potential to translate into a more sophisticated export basket if it targets the adding of value in the existing basket or the expansion of production into other economic activities and sectors, or both. This can bring greater resilience to external shocks through more diversified production and export structures and ultimately lead to structural transformation of the economy, bringing more inclusive growth.

In order for this to happen, however, and as shown in figure I, and to ensure that sustainable FDI inflows support such virtuous processes, countries must provide a specific set of conditions, such as sound macroeconomic conditions, further trade openness, enhanced trade-related infrastructure, a business-friendly environment and gender equality. With these enablers or drivers of investment in place, African countries could realize structural transformation of their economies and inclusive growth by channelling FDI inflows to strategic and inclusive sectors.

2.3 Drivers of manufacturing investment in Africa

A range of factors have an effect on manufacturing investment in Africa. It is fundamental that the African countries understand what the enablers of industrial investment are in order to design appropriate investment policies. The structural transformation of the continent can be achieved only if African economies can channel sufficient manufacturing and industrial investments that may upgrade their production structures, which open opportunities for greater value addition.

From this perspective, Balchin and others (2016) investigated the readiness of African economies to attract manufacturing investment by analysing key factors for successful manufacturing. On the basis of their analysis, they subsequently developed a manufacturing FDI potential index (see table 1) for nine countries: Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Rwanda, Uganda, the United Republic of Tanzania and Zambia. The index comprises several key FDI drivers, including domestic value added in manufacturing, recent performance in manufacturing exports, manufacturing value added per capita, past manufacturing FDI stock as a percentage of GDP, labour productivity in manufacturing, cost and reliability of electricity, quality of the business climate and infrastructure, education, population and economic complexity.

The results of the index outline that African countries need to perform better in various areas, especially the quality of the business climate, education and skills development and infrastructure and trade logistics, in order to channel more investment to export-based manufacturing sectors. This is commensurate with the evidence that emanated from the various empirical studies discussed in section 2.

Furthermore, the United Nations Industrial Development Organization (UNIDO) (2009) found similar results through survey-based research. Using a survey of multinational enterprises conducted in 11 African countries,¹¹ UNIDO corroborated the importance of an investment climate and a legal framework as drivers of investment by multinational enterprises. Moreover, it demonstrated that multinational enterprises are concerned mainly by the political economy as a guarantee of a sound investment climate. The survey showed that production inputs and international trade agreements were also key factors in the investment location decision.

Based on analysis by Balchin and others (2016), Ethiopia, Kenya, Mozambique, Nigeria and Zambia were the best positioned to attract FDI into export-based manufacturing. Moreover, each country has its own specific manufacturing-investment drivers. One common feature in these countries is the high rate of labour productivity in manufacturing. This result emphasizes the potential that Africa can have if it adequately harnesses its huge human resources by raising its educational base and technical skills. This could truly help the continent to channel more investment into the manufacturing sector.

Given the disparities in the investment drivers, it is useful to understand the factors that drive the good performance of some of the aforementioned countries. For example, Ethiopia performs well thanks to its low electricity costs for manufacturing, a large local market and low manufacturing

¹¹ The study excluded North Africa and focused on Burkina Faso, Cameroon, Ethiopia, Kenya, Madagascar, Malawi, Mozambique, Nigeria, Senegal, Uganda and the United Republic of Tanzania.

wages, as shown by the country's ranking in table 1. Ethiopia is indeed attracting labour-intensive manufacturing in light manufacturing industries such as leather and apparel. With regard to Kenya, its manufacturing performance is attributed mainly to the product complexity and the quality of infrastructure, while Rwanda performs relatively well thanks to its favourable business climate, trade logistics services and high-quality infrastructure.

These survey findings further provide some stylized facts on manufacturing investment drivers that may help to draw lessons for the continent as a whole. It is indisputable that the heterogeneity at the regional and subregional levels requires empirical evidence to understand how African countries could channel more investment. To date, this dimension has been relatively ignored/overlooked within the existing literature on investment in Africa and needs to be investigated further.

Table 1 : Total scores and ranking on the manufacturing foreign direct investment potential index

	Zambia	Nigeria	Kenya	Ethiopia	Mozambique	Rwanda	Ghana	United Republic of Tanzania	Uganda
Overall ranking	1	2	3	4	5	6	7	8	9
Overall score	56	65	66	71	71	73	75	75	78
Subindicators									
Average annual growth in manufacturing exports to the world (2005-2014)	7	2	9	4	5	1	8	3	6
Labour productivity in manufacturing (constant value added per person employed) (2013)	4	2	3	9	1	8	6	5	7
Domestic value-added content of gross exports as a share of total exported value added (per cent) (2011)	4	3	7	9	1	6	2	8	5
Average annualized growth in labour productivity in manufacturing (per cent) (2010-2013)	6	2	3	1	5	8	4	7	9
Estimated population size (2015)	8	1	4	2	6	9	7	3	5
Ease of doing business rank (2016)	2	9	3	8	6	1	4	7	5
Quality of overall infrastructure rank (2015-2016)	3	9	2	5	8	1	7	6	4
Secondary education enrolment rate (per cent)	1	4	3	7	9	6	2	5	8
Tertiary education enrolment rate (per cent)	9	2	7	4	5	3	1	8	6
Price of electricity (United States cents per kWh) (2016)	2	8	7	1	3	5	9	4	6
Number of electricity outages in a typical month (2013)	3	9	5	4	1	2	7	8	6
Manufacturing value added per capita (2013)	2	1	3	9	7	8	4	6	5
Country ranking on Economic Complexity Index (2014)	1	8	2	6	5	9	7	4	3
Manufacturing share of foreign direct investment stock (percentage of GDP) (number of years available)	4	5	8	2	9	6	7	1	3

Source: Balchin and others (2016).

3. Overview of African investment trends

The continent remains one of the fastest-growing economic regions globally. Although current FDI levels appear to be retracting, investment has undoubtedly played a key role in buttressing this growth, especially given that Africa has experienced significant increases in such flows since the turn of the century.¹² Contributing positive factors have included government efforts to end armed conflicts, improved macroeconomic conditions and reforms to create a better business climate.

Notwithstanding efforts to attract greater investment by African countries, FDI flows to the continent continued to decline in 2017, falling to \$42 billion¹³ from \$61 billion in 2015 amid low commodity prices. African countries therefore currently account for 3.2 per cent of global FDI, compared with approximately 5 per cent during 2012-2014.

There is also a high level of heterogeneity observed at the national, subregional and regional levels, which typically underlie a series of factors that need to be well understood. More fundamentally, this calls for a deeper analysis of what determines such flows to counter the root causes of decreasing investment and unlock its full potential on the continent. Against this backdrop, this section looks at some of the major investment trends and patterns that characterize FDI in Africa today, with a view to providing a basis for a deeper analysis of what determines such flows.

3.1 Foreign direct investment inflows: global trends

Global investment flows increased rapidly, from approximately \$200 billion at the beginning of the 1990s to \$1.43 trillion in 2017. The United Nations Conference on Trade and Development (UNCTAD) projects these flows to increase to \$1.51 trillion in 2018.

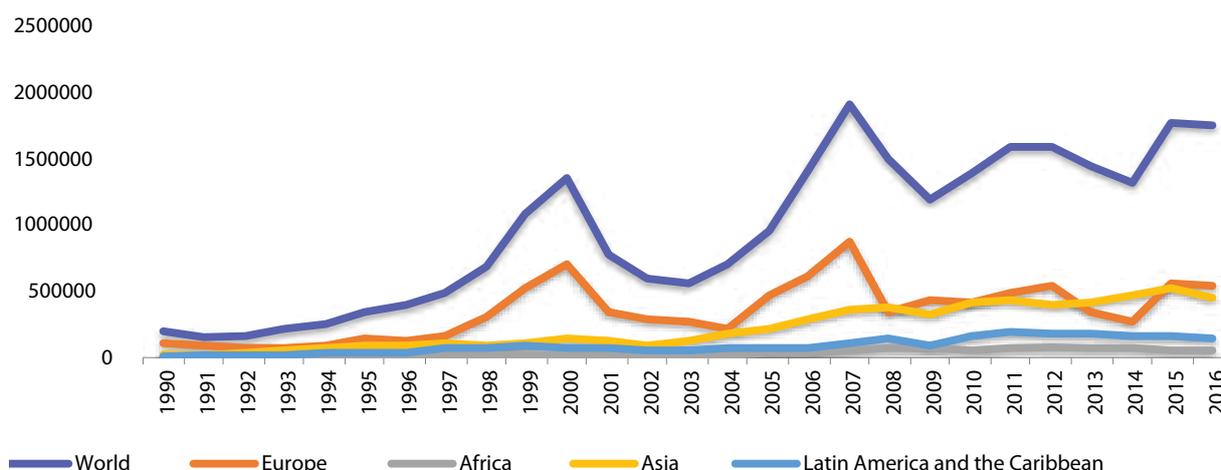
Figure II demonstrates that the FDI inflows in Africa have been structurally low, comparing with Asian, Latin American and European regions. Africa's participation in global investment flows remains staggeringly lower compared with the Asian, Latin American and the Caribbean and European regions. Indeed, the share of Africa in global FDI flows was only 3.2 per cent in 2017, although net FDI flows to Africa increased more than four-fold, from \$10.9 billion in 2000 to \$42 billion in 2017 (United Nations Conference on Trade and Development, 2018).

Overall, these trends point to bleaker prospects for the continent to harness this much-needed type of investment for its development. The overall performance of the region in attracting FDI is low relative to other developing regions. This structurally weak share is explained in part by the increasing dominance of China and other emerging markets since the 1980s in global investment.

12 According to UNCTADstat, aggregate foreign direct investment inflows in 2000 amounted to \$10.9 billion and grew to a record high of \$77.5 billion in 2012, before decreasing to \$59.4 billion in 2016.

13 United Nations Conference on Trade and Development preliminary estimate.

Figure II : Foreign direct investment inflows: global trends (Millions of United States dollars)



Source: United Nations Conference on Trade and Development (2017).

From another point of view, this poor performance could also be explained in part by the low levels of formal African trade, both around the world and on the continent, given that trade is well documented in the literature to be a conduit for FDI. Indeed, intra-African trade in goods accounts for approximately 15 per cent of the total recorded African trade (Economic Commission for Africa, 2015), which was much lower than in North America (37 per cent), the European Union (68 per cent) and Asia¹⁴ (57 per cent) in 2018¹⁵.

3.2 Foreign direct investment inflows: regional trends

There is a high level of heterogeneity in the distribution of FDI inflows in Africa. This is observed at the national, subregional and regional levels and typically underlies a series of factors that need to be understood well. In this regard, figure III shows the disparities in FDI inflows that exist throughout the African subregions.

Southern Africa is the dominant subregion in terms of FDI inflows, except during the period 2005-2007, when North Africa was the highest performing subregion before dropping substantially in 2011. In terms of FDI inflows shares, on average the Southern African region performance is driven by four countries: Angola (53 per cent), South Africa (19 per cent), Zambia (4 per cent) and Mozambique (4 per cent). Moreover, the Southern African performance during the period is also explained by the capacity of Mozambique and South Africa to attract investment in manufacturing and services, on the one hand, and the minerals sector, on the other.

The structural change in the trend of FDI inflows in the North African region could be explained primarily by the conflicts and tensions in some countries, which permeated investor confidence. Since 2012, North African FDI inflows recovered owing mainly to robust FDI to Egypt and Morocco.

14 Asian Economic Integration Report (2017).

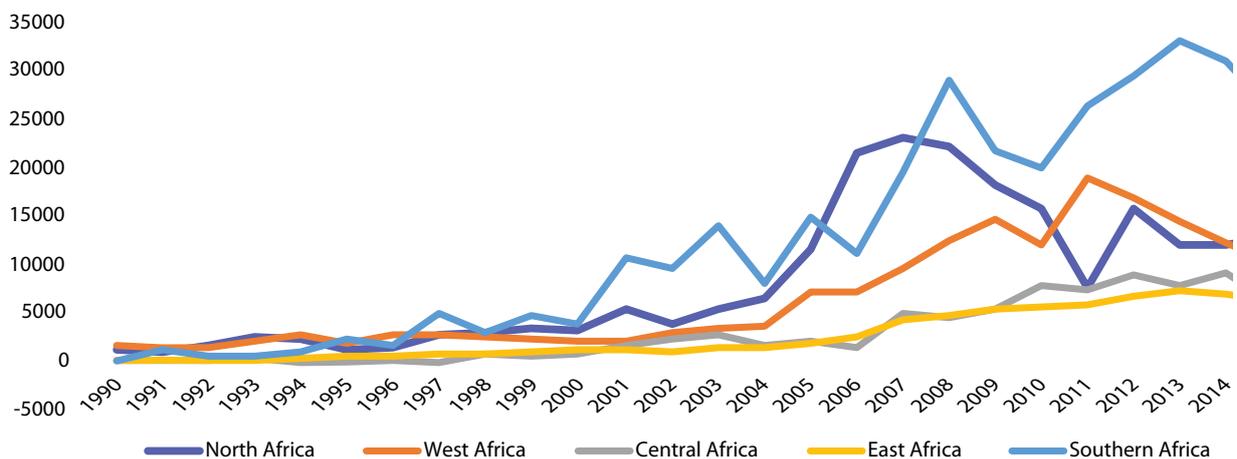
15 African Trade Report (2018).

Currently, the Southern African region is the highest performing region. The North African region comes in the second place, followed by West Africa, East Africa and Central Africa. West Africa records a good performance thanks to the recovery of Nigerian investment (an increase of 12 per cent in 2016). The East African FDI inflows performance could be due mainly to strong investment in Ethiopia (infrastructure and manufacturing) and Madagascar (services) in 2016.

Notwithstanding the numerous regional initiatives to promote regional integration, their effect on attracting intra-African investment has not been assessed. Figure IV depicts the progress made by regional economic communities in attracting intra-African investment by using the crude method of comparing the average percentage of intra-African investment inflows relative to GDP. The main observation is that the intra-African FDI inflows vary considerably throughout the regional economic communities for the envisaged period. Some regions, such as the Economic Community of West African States (ECOWAS), the Southern African Development Community (SADC), the Community of Sahelo-Saharan States (CEN-SAD) and the Common Market for Eastern and Southern Africa (COMESA) are displaying a clear but modest upward trend in increasing their share of intra-African investment inflows.¹⁶

This brief descriptive analysis of recent FDI trends demonstrates that there is heterogeneity among African regions. It is therefore essential to adopt a theoretical and empirical framework that allows for the capturing of specific regional disparities to better assess and measure the dynamic of investment determinants in Africa.

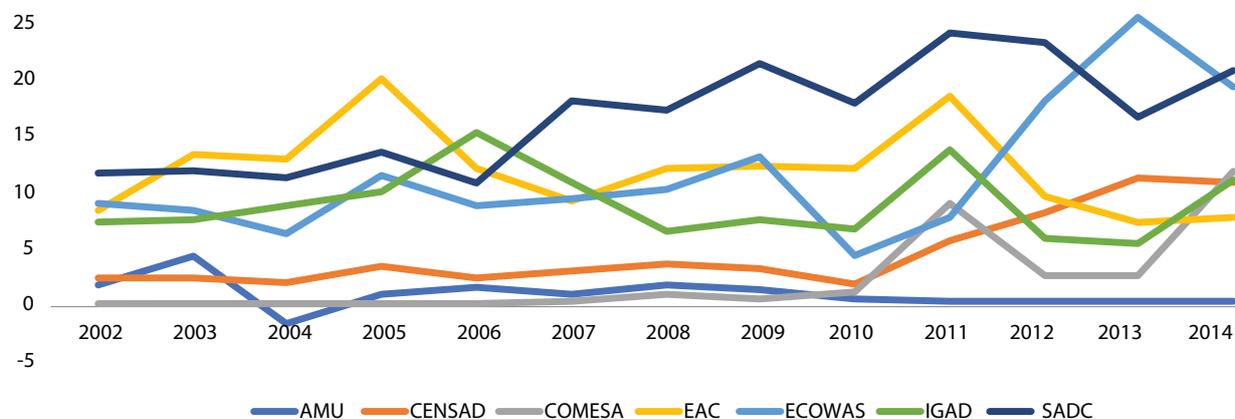
Figure III: Recent trends in foreign direct investment inflows in Africa: the existence of national and regional disparities (Millions of United States dollars)



Source: United Nations Conference on Trade and Development (2016).

16 The Economic Community of Central African States region is not covered, given the lack of sufficient data that is representative of that region.

Figure IV: Recent trends in intra-African investment: the existence of disparities within the regional economic communities (Average percentage of intra-African foreign direct investment to GDP)



Abbreviations: AMU, Arab Maghreb Union; CEN-SAD, Community of Sahelo-Saharan States; COMESA, Common Market for Eastern and Southern Africa; EAC, East African Community; ECOWAS, Economic Community of West African States; IGAD, Intergovernmental Authority on Development; SADC, Southern African Development Community.

Source: United Nations Conference on Trade and Development (2016).

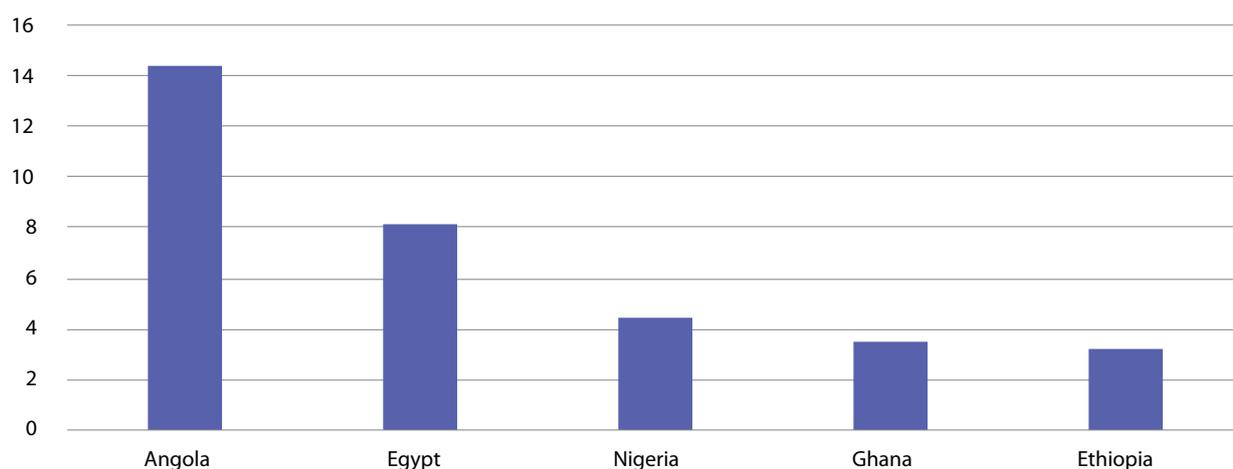
3.3 Geographical distribution of foreign direct investment in Africa

FDI inflows remain unequally distributed throughout the continent, with only five countries (Angola, Egypt, Ethiopia, Ghana and Nigeria) receiving nearly 57 per cent of the continent's total inflows in 2016 (see figure V).

The geographical distribution of FDI in Africa in 2016 at the subregional and country levels was also relatively heterogeneous. For example, in 2016, North Africa's inward FDI, driven by investors' rising interest in the Egyptian economy, amounted to \$14 billion in inward FDI, representing an 11 per cent year-on-year increase, while Algeria also registered an increase in inward FDI. On the other hand, Morocco saw a significant drop of 29 per cent.

East Africa registered the best relative improvement among all African regions, with \$7.1 billion in inward FDI, a 13 per cent increase, compared with 2015. FDI flows to Ethiopia, the fastest-growing country in the region, surged by nearly 46 per cent, to \$3.2 billion, with significant investment in infrastructure and manufacturing (United Nations Conference on Trade and Development, 2017). On the other hand, the United Republic of Tanzania and Kenya struggled, registering 15 and 36 per cent drops in FDI inflows, respectively, in 2016.

Figure V: Top five host economies in Africa, 2016 (Billions of United States dollars)



Source: United Nations Conference on Trade and Development (2017).

West Africa registered growth in FDI of 12 per cent, to \$11.4 billion, in 2016, owing in large part to an increase in investment flows to Nigeria. Ghana recorded a 9 per cent improvement in FDI inflows, up to \$3.5 billion. Conversely, FDI flows to Côte d'Ivoire, Liberia and Senegal shrank slightly during the same period.

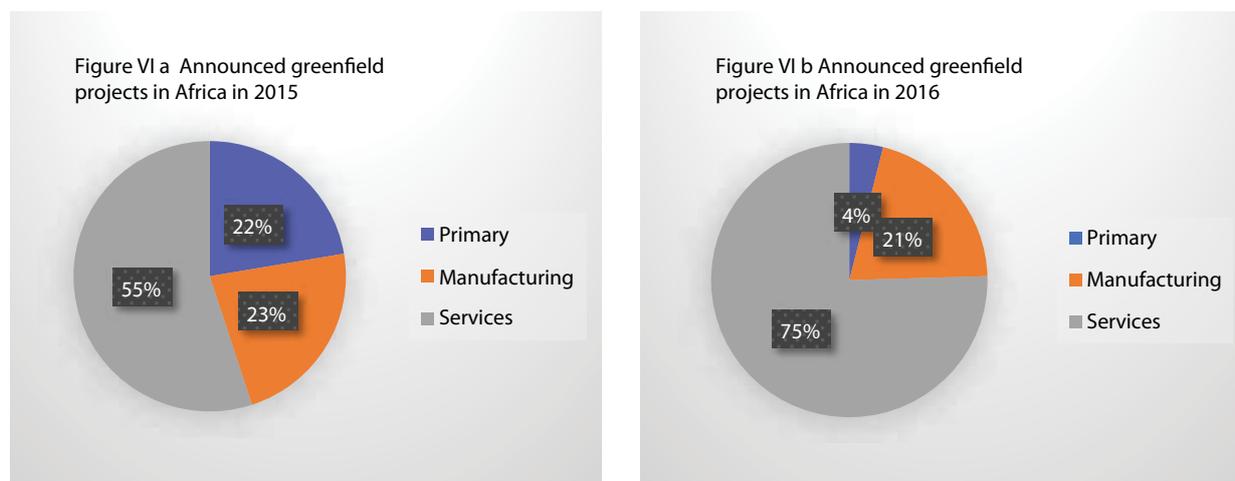
Southern Africa maintained its status of the most sought-after FDI destination on the continent, but suffered an 18 per cent drop, to \$21 billion, in 2016. Although FDI flows to Malawi and South Africa strengthened somewhat, Angola and Mozambique were among the countries that saw their inward investment flows dwindle.

Weakened by political uncertainty and unrest, FDI to Central Africa dropped by 15 per cent, to \$5.2 billion, in 2016. While investment flows to Gabon and the Congo increased, the Democratic Republic of the Congo registered a decrease.

3.4 Sectorial distribution of foreign direct investment in Africa

On the basis of data available on greenfield projects, the continent registered an increase in the value of such newly announced projects, from \$67 billion in 2015 to \$94 billion in 2016. In addition to a noticeable sectoral shift away from the primary sector in favour of services (see figure VI), the importance of non-Western investors increased significantly. African investors accounted for only \$5 billion in 2016, compared with \$12 billion in 2015.

Figure VI: Announced greenfield projects in Africa in 2015 and in 2016 (relative weight) (Per cent)



Source: United Nations Conference on Trade and Development (2017).

Sectors such as agriculture, energy, construction, natural resources and water continue to attract FDI in Africa. Significant progress is being made in the agriculture sector, in which there is huge potential for more investment. A damper on investment in this sector has been the region's agricultural productivity growth, which lags behind the rest of the world, growing at roughly half the average rate for developing countries. Likewise, growth in land and labour productivity has been modest.

In the light of the demographic changes and rising middle class population, energy and services emerge as sectors with significant investment potential. Indeed, services have also attracted the attention of African investors. Financial services alone accounted for approximately 50 per cent of intra-African greenfield investment projects during the period 2003-2014. This suggests that openness in services and services trade, which includes financial services, could help Africa to attract the much-needed investment to finance its structural transformation and development.

Large-scale natural resource investment in Africa can potentially help to transform the continent's economies and bring much-needed economic growth if the revenue is managed properly and effectively. Some countries have been experiencing huge investment in natural resources, in particular oil, minerals and gas, as exemplified in earlier subsections. Africa, which is home to some of the biggest oil and gas reserves in the world, possesses geological resources that remain largely underexplored and untapped. But the benefits of associated investment into these sectors still need to be tapped into if it is to contribute to the continent's structural transformation.

3.5 Drivers of foreign direct investment inflows: correlation analysis

Figure VII shows the relationships between intra-African FDI inflows and the following variables that have been readily documented in the empirical literature on FDI determinants: GDP per capita, trade openness, secondary level enrolment,¹⁷ the gender parity index in secondary school enrolment and the share of manufactured imports during the period 2002-2014.¹⁸

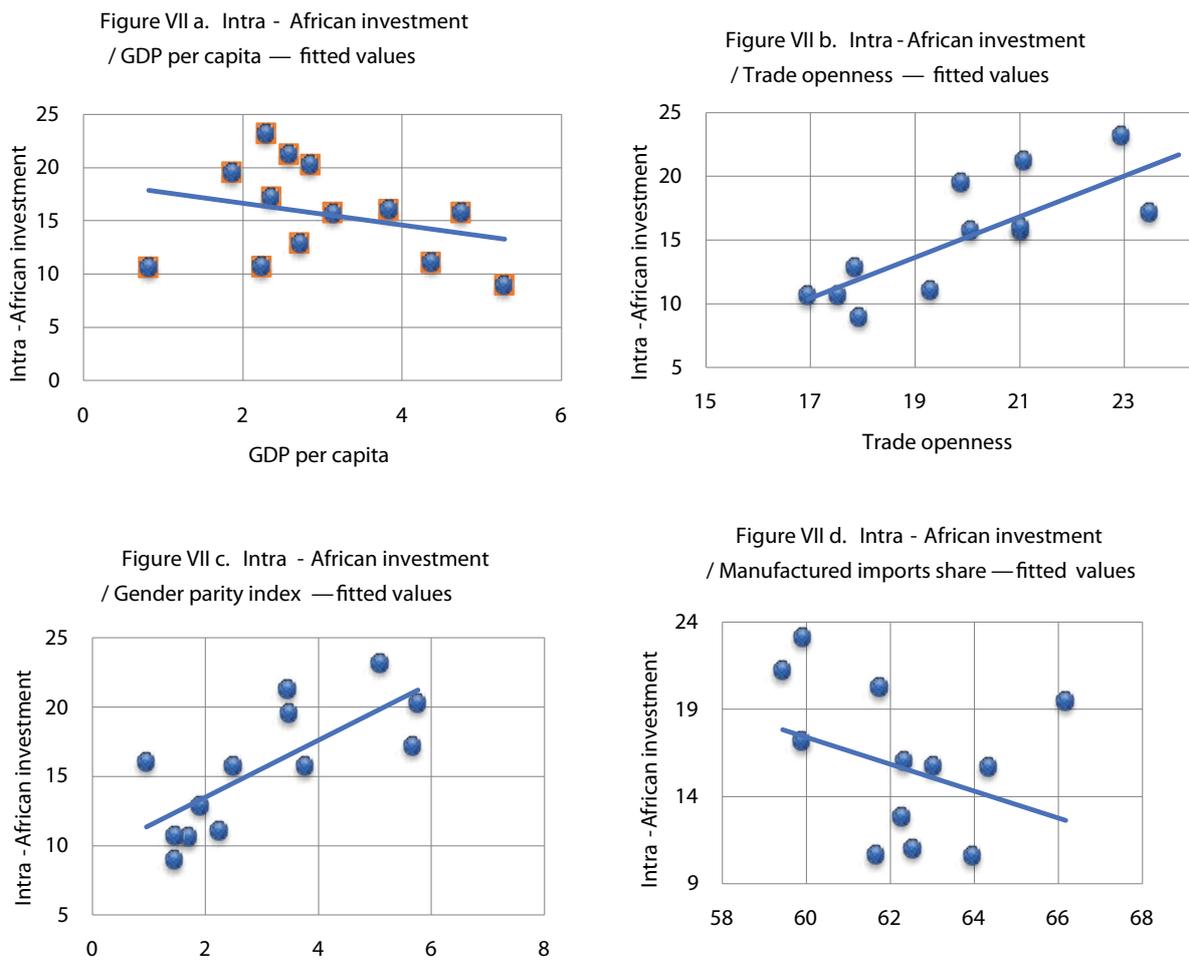
With regard to GDP per capita and the share of manufactured imports, their relationships with intra-African investment are rather negative, as shown in figures VII a and VII c. These results suggest that, as countries increase their GDP per capita and their share of manufactured imports, intra-African investment decreases, and vice versa. For the trade openness and Gender parity, as revealed in figure VII b and figure VII d, their relationships with intra-African investment are rather positive. A positive correlation between trade openness and intra-African investment suggests that intra-African investment contributes to further integration of the African continent into the global economy through the boosting of foreign trade flows. This offers a direct correlation between trade liberalization policy efforts and intra-African investment. African countries can therefore consider attracting intra-African FDI through the pursuit of regional and international integration policies. This relationship further suggests that commercial integration and intra-African investment could be complements rather than substitutes in Africa, an important consideration for the creation of a common market in the context of the African Continental Free Trade Area, which is expected to allow for the free flow of both trade and capital.

While these correlations are useful, causality between intra-African investment and these variables is yet to be established, which is why this primary analysis should be complemented by empirical testing of intra-African investment drivers.

17 It is an indicator drawn from the gender parity index.

18 The variables are collected from the world development indicators, except intra-African investment, which is taken from the United Nations Conference on Trade and Development database.

Figure VII: Relationship between intra-African investment and selected variables



Source: Economic Commission for Africa computation, with data from the world development indicators and the United Nations Conference on Trade and Development foreign direct investment database.

4. Empirical estimation: method and results

The present study includes an empirical testing to assess what is driving intra-African investment. As a first step, it develops a comprehensive panel data set during the recent period 2002-2014. The panel covers bilateral investment flows among 49 African countries¹⁹ and is based on available investment data provided by UNCTAD. On the basis of the data available and using econometrics techniques that have been considered in previous empirical literature,²⁰ coupled with various development and economic scenarios, the study provides estimations of determinants of intra-African investment and contains a discussion of the results and their implications from a policy perspective.

4.1 Empirical specification and methodology

A traditional research methodology that is considered to be the workhorse for analysing trade flows and that has also been increasingly used to study foreign investment flows is the gravity model (Blonigen and Piger, 2014). Unfortunately, the lack of exhaustive data on bilateral FDI in Africa does not allow for traditional gravity model testing. Moreover, the recent research reviewed previously in section 2 of this study clearly indicates that there is substantial heterogeneity among African countries that needs to be taken into account.

The analysis of intra-African investment flows therefore requires a theoretical and empirical framework that allows for the capture of specific continental and regional disparities in order to better assess and measure the dynamics of determinants of FDI in Africa. The research from Anyanwu and Yaméogo (2015) and Blonigen and Piger (2014) proposed the following standard approaches that could be further adjusted to accommodate the aforementioned heterogeneity. In their theoretical framework, the intra-African investment determinants model is defined as follows:

$$\left(\frac{FDI_{it}}{GDP_i}\right)_t = \alpha_0 + \alpha_1 \left(\frac{FDI_{it}}{GDP_i}\right)_{t-1} + \beta X_{it} + \varepsilon_{it} \quad (1)$$

Where i and l denote country, region (subregion or regional economic community), respectively, while t denotes time in year. $\left(\frac{FDI}{GDP}\right)_{ij}$ represents the net FDI inflows as a percentage of GDP, α_0

is an intercept, β is a vector of coefficients and ε_{ijt} is the error term, representing a myriad of other explanatory factors of FDI. Given that regional heterogeneity is assumed in the model, vector X cannot include the same list of variables from one subregion (or regional economic community) to another.

The approach proposed is first to review and analyse the drivers of intra-African investment on the basis of FDI inflows to Africa (l =Africa). Subsequently, the analysis focuses on the determinants of investment on the basis of inflows to subregions (l = East Africa, North Africa, Southern Africa

19 The countries are reported in the annex to the present report.

20 See, for example, Anyanwu and Yaméogo (2015) and Mijiyawa (2015), discussed in section 2.2.

and West Africa).²¹ Lastly, the drivers of investment are evaluated on the basis of FDI inflows to regional economic communities (I =SADC, East African Community (EAC), COMESA, CEN-SAD, Intergovernmental Authority on Development (IGAD) and Arab Maghreb Union (AMU)).²²

Regarding the estimation technique, given the dynamic nature of the regression and especially the inclusion of a lagged dependant variable, the generalized method of moments technique offers a more consistent and efficient estimation than ordinary least squares. Generalized method of moments procedures also overcome the problems of omitted variables, endogeneity bias and reverse causality. These problems stem from the correlation between the explanatory variables and the country-specific term, as well as the lagged dependent variable and error.

The difference estimator is obtained after a two-step procedure. In the first step, the retained residuals define the consistent matrix estimate of variance–covariance errors. Given that the error terms are independent and homoscedastic, the difference estimate is asymptotically more consistent than that seen in the first stage. The presence of error terms second-order correlations must subsequently be tested to ensure generalized method of moments estimator consistency. Indeed, the estimator consistency depends on the following assumption $E(\varepsilon_{ijt} - \varepsilon_{ijt-2}) = 0$. The test statistic is asymptotically standard normal under the null hypothesis and is given by $N = \frac{\Delta\varepsilon_{-2}\Delta\varepsilon^*}{\sqrt{\Delta\varepsilon}}$ with ε_{-2} : residuals twice lagged vector and ε^* is a vector of trimmed $\hat{\varepsilon}$ to equal ε_{-2} .

The Sargan Test for overidentifying restrictions is performed. Under the null hypothesis, the Sargan statistic is asymptotically distributed as a X^2 with p^{-k} degrees of freedom and is written as $S = \Delta\hat{\varepsilon}'(\sum_{i=1}^n W_i' \Delta\hat{\varepsilon}_i \Delta\hat{\varepsilon}_i' W_i)^{-1} W' \Delta\hat{\varepsilon}$ (2), in which W is the instruments matrix, p is the columns number in W and k is the number of estimated parameters.

4.2 Data description

Taking into consideration the empirical literature amply discussed in section 2, investment drivers were considered and finally retained on the basis of their statistical significance using the methodology described in section 4.1 at the African and regional levels. These include, or were proxied by, the variables discussed below.

Macroeconomic conditions and economic development encompass real GDP growth rate, inflation, market size (population in the country/total population), trade openness (total trade as a share of GDP and average tariffs on imports), ODA received (as percentage of GDP), gross fixed capital formation (as a percentage of GDP) and a political index (Polity).²³

21 Central Africa is not covered because of the lack of data on intra-African investment for that subregion.

22 The Economic Community of West African States is not covered, given that its membership is exactly mirrored by the West Africa subregion. This one-to-one country consistency is not the case of the other regional economic communities and their relevant subregions. Furthermore, as is the case with Central Africa, the Economic Community of Central African States is not covered owing to the absence of data that sufficiently covers and allows for the empirical testing of it.

23 The variable Polity also captures governance and institutional indicators such as corruption, government effectiveness, voice accountability and political stability. Polity is derived from the Polity Project IV (World Bank), which is the most commonly used measure of a country's political regime in similar empirical studies. In particular, it captures the political regime's dynamic in events of interregnum and transition. See, for example, Kucera and Principi, 2016; Marshall and Jagers, 2010; and Rock, 2007.

The variables in question are the following:

- a) Infrastructure development: availability of infrastructure is important for emerging and developing countries. As a proxy to this variable, mobile phone subscribers per 100 people and electricity per capita are used;²⁴
- b) Human capital and gender parity in education: the variables used are gross secondary school enrolment and the gender parity index in secondary school enrolment;²⁵
- c) Logistic performance: the Logistic Performance Index, which measures the perceptions of a country's logistics on the basis of quality of trade-related and transport-related infrastructure, ability to track and trace consignments, quality of logistics services and ease of arranging competitively priced shipments, based on the efficiency of the customs clearance process and frequency with which shipments reach the consignee within the scheduled time;
- d) Manufactured and industrial development: manufactured imports (percentage of merchandise imports), manufactured value added (as percentage of GDP), industry value added (as percentage of GDP) and employment in industry (as a percentage of total employment);
- e) Agglomeration effects: to test for agglomeration effects, the effects of past FDI inflows on current FDI inflows are considered. Agglomeration economies may be present when foreign investors are attracted to countries with already existing and sizeable foreign investment. To measure such effects, the first lag of FDI inflows (as a percentage of GDP) is retained;
- f) Crises: a dummy variable for the 2007 financial crisis is included, and both immediate and delayed effects are considered in the estimations.

The various indicators described above are collected from the world development indicators database, except for the following variables: FDI inflows taken from UNCTAD database, ²⁶ Polity that is taken from Polity IV database (Variable Polity2, World Bank database), the average tariffs on imports taken from the Fraser Institute and the Logistics Performance Index, which is taken from the World Bank database. The table presented in the annex to this report shows the descriptive statistics of the main variables for Africa estimation and the subregions on the continent. The estimations respect the criteria of minimum number of observations required to estimate a panel, namely, a minimum of 30 observations.

²⁴ Electricity is measured as total net installed capacity of electric power plants, main activity and auto producers.

²⁵ This variable will enable a review of whether investing in girls' education at the secondary level has a positive or a negative impact on intra-African investment.

²⁶ The study covers bilateral investment flows among 49 African countries: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, the Congo, Côte d'Ivoire, Chad, the Democratic Republic of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, the Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Libya, Liberia, Madagascar, Malawi, Mozambique, Mauritius, Morocco, Mali, Mauritania, Namibia, the Niger, Nigeria, the Sudan, Swaziland, Rwanda, Seychelles, Sierra Leone, Senegal, Somalia, South Africa, Togo, Tunisia, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

4.3 Results and discussion

Determinants of intra-African investment in Africa: a continental analysis

The results of the econometric research performed at the continental level are portrayed in table 2. The results reveal that increasing investment within Africa for the envisaged period has required infrastructure development, as depicted by the coefficient sign and significance level of the variable electricity per capita. This corroborates the notion that infrastructure is a critical factor for Africa's development, with important knock-on effects for investment.

The results also show that exposure to regional and international trade appears to have positive and significant effects on explaining such investment flows. From a policy perspective, these results point to both industrial and trade policies having the potential to boost investment in Africa, if properly designed. Trade openness has positive and significant impacts on investment inflows in Africa, and countries that are most exposed to regional and global trade are also most likely to attract investment. The variables total trade (as a percentage of GDP) and average tariff on imports suggest that trade liberalization could foster intra-African investment. This result, however, is not homogenous and shared by all the regions in Africa, and some heterogeneity exists, as will be discussed in the next subsection.

For Africa as a whole, the estimate of the imports of manufactured goods and the share of industrial labour force have negative and significant effects on intra-African investment. In addition, countries with higher manufactured imports attract less intra-African FDI. African economies should therefore promote their manufactured and industrial sectors to boost intra-African investment through industrialization and better inclusion into regional value chains. When assessed jointly with the second set of variables on infrastructure, the results on trade openness further substantiate some of the earlier research, which prioritizes the need to invest more in trade-related infrastructure to maximize knock-on effects from trade liberalization and trade facilitation efforts in the continent (Economic Commission for Africa, 2012 and 2014).

As stated above, infrastructure development contributes positively to explain FDI inflows. The crowding-out effects of domestic investment on FDI, however, are also observed in the results through the significant negative effect of gross fixed capital formation (as a percentage of GDP). This effect occurs through two mechanisms: a competitive mechanism on the product market and on the factors market (Helpman and others, 2004) and the "Dutch disease" mechanism/phenomenon, through expenditure effects (Cordon and Neary, 1982). Indeed, the increase in the multinationals' exports implies an increase in the real effective exchange rate and reduces the competitiveness of other tradable sectors in the economy (Bourdet and Falck, 2006).

The policy implications of this crowding out are two-fold. First, African countries should target intra-African investment that introduces new technologies and different know-how and expertise with the objective of building a complementary relationship between intra-African and domestic investment. This implies putting in place conditions for the spread of new technology that can lead to spillover benefits from those African countries that are ahead of the innovation curve to those

that experience technology gaps and deficiencies. ECA research²⁷ has also demonstrated, using the example of East Africa, that regional integration can support the spread of innovation and improve competitiveness outside the innovating country. Second, and most important, African countries need to develop policies that support public-private partnerships and blended finance that targets the development of transboundary technology and innovation projects and programmes, given that these may harness investment more easily and thereby facilitate a wider dispersion of expected benefits and profit-sharing resulting from them.

The continental analysis also indicates that previous levels of intra-African investment had a negative effect on the current level of intra-African investment. This would indicate that investment within Africa appears to be unstable. An explanation for this could be the political instability in some regions, such as North Africa (e.g., in Libya and the Sudan) and Central Africa. Intra-African investors are rather risk-averse, as proven by the reallocation of various multinational firms from Tunisia to Morocco during the period 2011-2015.

It is widely recognized in both academic and policy circles that trade facilitation measures could have a significant positive impact on global economic growth. Indeed, the WTO trade agreement, namely, the Agreement on Trade Facilitation, is ambitious, and empirical evidence has shown that its implementation could increase global exports up to \$1.04 trillion annually and generate a gain of \$960 billion. It could also increase the number of jobs in the developed and developing world by 21 million (Hufbauer and Schott, 2013; World Trade Organization, 2015).

The econometric analysis indicates that reducing trade costs and improving logistical facilities clearly has had the potential to attract more intra-African investment, except for the crisis period of 2007-2009. As indicated by the World Trade Organization (2015), countries with more inefficient trade procedures receive less FDI. There is therefore evidence of a complementarity relationship between greater trade being generated through improved trade procedures and FDI. Regulation that targets a reduction in trade costs will therefore increase the probability of a firm investing and further underscores the potentially synergic relationship between investment and trade in Africa, if efforts are made to ensure that trade and investment are facilitated through relevant policies and regulation.

In order to approximate the impact of the logistics environment, the study uses the Logistics Performance Index proposed by the World Bank. The results at the continental level reveal that there is a significant and positive impact of improving the Index as a way to attract more investment. This confirms that reducing trade costs will boost intra-African trade, in line with Mevel and others (2016), who showed that the African Continental Free Trade Area would boost Africa's exports by nearly \$70 billion in 2020. This will boost intra-African investment to support vertical production and promote economic diversification.

The business environment and trade costs component proxied by the Logistics Performance Index are also relevant in explaining intra-African investment. Trade costs in developing countries are

²⁷ Presented by the Economic Commission for Africa Subregional Office for East Africa during the twentieth meeting of the Intergovernmental Committee of Experts in February 2016. Available from <http://repository.uneca.org/bitstream/handle/10855/23481/b11580537.pdf?sequence=1>

equivalent to an ad valorem tax of 219 per cent (World Trade Organization, 2015). From this perspective, the amelioration of the various components of the Index could enhance intra-African investment. The African Continental Free Trade Area could serve as a platform for common rules to reduce such costs and generate a positive dynamic effect on intra-African investment. This would facilitate the inclusion of the African economies into regional and global value chains and contribute to the industrial transformation of the continent. These results are in line with those of Balchin and others (2016) and the United Nations Industrial Development Organization (2009). In particular, these surveys found that the quality of the business climate was an enabler of investment and substantiated the evidence in several African countries.

Moreover, the estimation shows that a gender-sensitive education policy has a significant positive and dynamic effect on intra-African investment. Investing in girls' education plays a role in driving investment. African countries that have a larger educated labour force of women tend to attract more intra-African investment. As revealed by the various statistical methods employed in the study, intra-African investment is negatively correlated with the absence of gender parity in secondary education. The powerful corollary of this result is that inclusive social policies, which promote gender parity in access to education, could enhance the ability of African countries to attract more intra-African investment. If these results are further associated with evidence from the ground that cross-border trade in Africa is characterized by women traders, and that the African Continental Free Trade Area could put in place concrete measures to facilitate trade at the border, the area is also likely to make African trade more inclusive.

Indeed, major gains of the African Continental Free Trade Area are forecast to be in the industrial sector, which, as has been demonstrated in the *Economic Report on Africa* series, has historically been the channel to sustained, inclusive and job-rich growth. This is consistent with Africa's aspirations to structurally transform its economy and achieve sustainable development.

Lastly, African countries remain very much vulnerable to the evolution of the global economy. African economies were also affected by the 2007 crisis. More precisely, the empirical evidence laid out in the study shows that the effect of the crisis has not been immediate but delayed, which reflects the strong structural dependence and exposure of the African market to international shocks and macroeconomic global instability or exogenous shocks through the volatility of the commodities market. This also calls for export diversification as a necessary condition to raising Africa's resilience to external shocks.

Table 2: Estimation results for the African region

Variables	Generalized method of moments estimation
L1.FDI/GDP	- 1.363 ^c
Trade openness	0.119 ^c
Mobile subscriptions per 100 people	- 0.001
Electricity per capita	0.097 ^b
Average tariffs on imports	- 0.013 ^c

Variables	Generalized method of moments estimation
2007 crisis effect	0.881 ^a
Polity	- 0.022
Gross fixed capital formation (percentage of GDP)	0.007 ^b
Education secondary level	- 0.001 ^c
Gender parity in secondary education	0.423 ^c
Manufactured imports (percentage of merchandise imports)	- 0.001 ^a
Employment in industry (percentage of total employment)	- 0.004 ^c
Logistic Performance Index	0.012 ^a
Test of significance of Fisher (p_value)	0.000
Sargan test of overidentifying restrictions (p_value)	0.249

Note: The significance of the coefficients at the 1 per cent, 5 per cent and 10 per cent levels are portrayed as $p < 0.01$ (c), $p < 0.05$ (b) and $p < 0.1$ (a), respectively.

Determinants of intra-African investment: a regional analysis

Given the heterogeneity of intra-African investment flows discussed earlier in this section, the study now focuses on reconciling a regional perspective at the subregional and regional economic community levels. It captures the key determinants of intra-African investment and the channels through which this investment positively influences economic development and transformation in the various subregions. Correspondingly, estimation (1) presented in section 4.1 is specifically performed for East Africa, North Africa, Southern Africa and West Africa. Results for each of these subregions are presented in table 3.

In the same vein, the analysis at the regional economic community level includes CEN-SAD, COMESA, IGAD, SADC and the Arab Maghreb Union. The results are presented in table 4.²⁸

The empirical results portray the drivers of the intra-African investment for each subregion and regional economic community. Once again, the explanatory variables were chosen on the basis of overall significance of the FDI model (Fisher Test)²⁹ and the test of the instrument validity or Sargan Test, as described in section 4.1. The results outline the divergence in the drivers of the intra-African investment at the continental levels versus the subregional and regional economic community levels.

Several observations arise with regard to the results. First, agglomeration (captured through the lagged dependent variable) has a negative impact on intra-African investment inflows in virtually all regions.³⁰ This means that the presence of FDI in a country at present will not always attract

28 As explained in section 4.1, the subregion and regional economic community coverage has been limited by the poor data availability for the Economic Community of Central African States region.

29 The Fisher Test assesses the strength of evidence in data by testing a model's overall significance against the statistical null hypothesis (the variables are non-significant).

30 Except for Southern and West Africa and the Southern African Development Community and the Common Market for East African States, where results were not significant.

more FDI to that country in the future. Therefore, intra-African investment-friendly policies should be well designed in order to ensure the sustainability of such inflows. Equally, reversing or discontinuing policies that promote a conducive environment for investment that are considered as developmental or transformative should be avoided.

Results also indicate that exposure to regional and international trade appears to have mitigated and mixed effects on intra-African investment in the subregions and regional economic communities. For example, in the North African and IGAD subregions, trade openness has a positive impact on investment, which confirms trade-investment complementarities and is consistent with continental level results discussed earlier. For Southern Africa and SADC countries, however, the effect is the exact opposite.

According to FDI theory, the impact of trade openness on investment inflows depends on the firm's incentive to engage in FDI activities (Dunning, 1993). Anyanwu (2012) found a negative impact of trade openness on market-seeking FDI inflows. Such inflows are created by multinational enterprises that seek to serve the local market through subsidiaries in the host country when they encounter restrictions to import products to that country (the tariff-jumping theory). In this sense, the subregion (Southern Africa) and SADC appear to attract relatively more market-seeking intra-African investment that substitutes for trade. This corroborates the results of the South Africa Foundation (2004), which estimated that market-seeking FDI (based on number of projects) had been concentrated in SADC before 2004. The benefits linked to international and regional openness are therefore conditional on the nature of FDI, the trade policy convenience and the degree of trade openness.

The results also reveal that an economically conducive environment is likely to be a magnet for intra-African investment. In particular, trade facilitation and the reduction in trade-related costs appear to be key determinants of intra-African investment for North African and IGAD member States according to the significant positive effect of the variable Logistic Performance Index. By contrast, the Index appears to negatively influence intra-African investment for CEN-SAD and COMESA member countries. A plausible explanation is that the Index captures trade-specific openness measures that are sensitive to a type of intra-African investment that is market-seeking and which, in presence of better trading conditions, will be substituted by trade flows.

A fundamental element to attract investment is building industrial capacity, which includes developing soft and hard infrastructure. The empirical results demonstrate that supporting the infrastructure, in particular information and communications technology infrastructure, could positively influence intra-African investment for Southern African, COMESA and SADC countries (the variable mobile subscriptions per 100 people). For the North African region, the increase in the electricity per capita strongly and positively influences intra-African investment. These results are in line with some previous findings, especially those of Mupimpila and Okurut (2012), who showed that low levels of infrastructure connectivity mattered in explaining inward FDI.

Results also point to growth acting positively on intra-African investment inflows in East Africa, COMESA and IGAD. Intra-African investment in them could be explained by their relative good economic performances that enabled a more efficient scale of production through economies of

scale. These findings corroborate previous research, in particular that of Demirhan and Masca (2008), who demonstrated that growth rate per capita positively affected FDI inflows to developing countries. For CEN-SAD countries, GDP growth exerts a negative yet almost negligible impact on intra-African investment. This is the case when GDP growth rate is greater than the FDI growth rate (Dauti, 2008).

Results for the human capital variables selected for the study portray a positive effect of gender parity in secondary school enrolment on intra-African investment inflows at the subregional level, as shown in tables 3 and 4 for the Southern African and West African region, and CEN-SAD, ECOWAS and SADC, respectively. Moreover, for all these regions (except for CEN-SAD, for which no relationship was portrayed), the impact of the variable enrolment in the secondary level on intra-African FDI is negative. These results demonstrate that it is only an inclusive educational policy³¹ that can support greater intraregional investment, which is consistent with what has been observed at the continental level. Some regions such as East Africa and the Arab Maghreb Union recorded a negative effect of gender parity in the secondary school enrolment on intra-African FDI. This could be explained by the presence of relatively low gender parity in secondary education or by the prevalence of higher levels of gender disparity in primary and tertiary education.

In turn, ODA has been found to play a positive and significant effect in intra-African investment flows to the Arab Maghreb Union and IGAD. A plausible explanation could be that, in those regions, ODA has been able to serve as a pull factor in co-financing development through investment sourced from the region (i.e., blended finance). Oxfam (2017) sustained that, while ODA could be used to eliminate investment barriers, it should be channelled to development-effectiveness values, namely, national ownership and transparency. ODA could also catalyse private finance through risk mitigation and the promotion of an enabling investment environment. This is important from a policy perspective for African countries, which need to expand the sources of their development finance in order to achieve the goals and aspirations contained in the 2030 Agenda and Agenda 2063.

Interestingly, ODA appears to be a deterrent to intra-African investment in the Southern African and SADC regions, as portrayed by the negative relationships shown in tables 3 and 4. This may be attributed to the absence of channels or modalities to attract and lock in other types of investment, such as domestic investment, that could further attract FDI. As mentioned in section 2, such modalities can support blended finance (International Financial Corporation, 2016; African Development Fund, 2016; United Nations, Department of Economic and Social Affairs, 2015, among others) which combines ODA with alternative means of finance, such as investment. In the absence of such development finance alternatives, ODA could be serving as an imperfect substitute for investment.

Industrial sector development is another important driver for CEN-SAD and the Arab Maghreb Union in attracting intra-African FDI, while for COMESA and West Africa, the relationship appears to be negative. In CEN-SAD and East Africa, higher manufactured imports appear to have deterred

31 An inclusive educational policy should be proactive in identifying the barriers that many encounter in gaining access to educational opportunities and that may lead to discrimination of specific groups within the population, while at the same time evaluating the resources required to overcome those barriers.

intra-African FDI, which is consistent with the results presented at the continental level. This may point to the absence of industrial policies that support domestic and regional value addition. Policies that promote the creation of value in the substitution of imports could help to reverse this trend. Coupled with investment policies that proactively support the development of an industrial and manufacturing sector, this could promote structural change in the production and trade structures of CEN-SAD and East African countries for their better inclusion into regional value chains.

Lastly, regional estimates also suggest that the size of the market is an important factor in explaining intraregional investment in the West Africa/ECOWAS region, further emphasizing the importance of having a regional market to ensure a higher return of scales. The results for this region further substantiate that multinational enterprises are more inclined to invest when the market is bigger. This is due to the fact that reducing trade costs provides more incentives to invest when the market reaches a critical size, which is likely to increase the probability of vertical investment, an important condition for developing forward linkages that will contribute to enhancing a vertical integration production process in which value-adding activities are performed, provide opportunities for tapping into regional and global value chains and contribute to economic transformation. This is particularly significant for the West African region, which is indeed the larger region. Furthermore, larger economies attract more market-seeking investment, and therefore boosting intra-African investment can also have a positive and dynamic effect on regional integration.

Lastly, the study also identifies a number of factors constraining intra-African investment. These include political uncertainty and inflation in the Arab Maghreb Union region and the financial crisis of 2007 in Southern Africa, among others.

Indeed, all regional estimates show that at least some component of macroeconomic stability appears to be an important driver for intra-African investment. This result is relatively more significant for the regions where there is absence of nominal convergence³² and is in line with Anyanwu and Yaméogo (2015), who also found that monetary unions attracted greater FDI to Central and West Africa, which could explain why nominal convergence is a determinant of the attractiveness of intra-African investment.

Table 3: Generalized method of moments estimation results for African subregions

Variables	East Africa	North Africa	Southern Africa	West Africa
L1.FDI/GDP	- 0.447 ^a	- 0.678 ^a	0.160	- 0.225
Trade openness		0.004 ^c	- 0.022 ^c	
Mobile subscriptions per 100 people			0.012 ^c	
Electricity per capita		2.193 ^a		1.234
Average tariffs on imports	0.003	- 0.007		- 0.019
2007 crisis effect	- 0.507	- 0.046	- 0.194 ^c	- 0.081
Polity	- 0.007			
Education secondary level	0.025 ^b	- 0.002 ^a	- 0.008 ^c	- 0.009 ^c

32 The type of convergence is neither nominal convergence (convergence in nominal variables such as interest rates and inflation) nor real convergence (convergence in per capita incomes).

Variables	East Africa	North Africa	Southern Africa	West Africa
Gender parity in secondary Education	-2.031 ^b		0.127 ^c	0.021 ^c
Manufactured imports (percentage of imports)	-0.014 ^a	-0.059		
Employment in industry (percentage of total employment)		-0.006 ^b		
Logistics Performance Index		0.002 ^a	-1.998	
Market size	-0.602			0.012 ^b
GDP growth	0.156 ^b			
Official development assistance (percentage of GDP)			-0.005 ^c	
Inflation		-0.046	0.008	
Manufacturing, value added (percentage of GDP)	0.018			
Industry, value added (annual percentage growth)			-0.004	-0.009 ^a
Fisher Test (p_value)	0.000	0.000	0.000	0.000
Sargan test (p_value)	0.124	0.250	0.765	0.250

Note: The significance of the coefficients at the 1 per cent, 5 per cent and 10 per cent levels are portrayed as $p < 0.01$ (c), $p < 0.05$ (b) and $p < 0.1$ (a), respectively.

Table 4: Generalized method of moments estimation results for regional economic communities

Variables	CEN-SAD	ECOWAS	COMESA	IGAD	SADC	AMU
L1.FDI/GDP	-1.417 ^c	-0.225	-0.449 ^b	-0.434 ^a	0.174	-0.215 ^a
Trade openness	0.003		0.001	0.017 ^a	-0.015 ^a	-0.002
Mobile subscriptions	0.006		0.001 ^b	-0.001	0.012 ^c	
Electricity per capita	-2.845	1.234				1.341
Average tariffs on imports		-0.019				
2007 crisis effect	1.909 ^c	-0.081	3.925	2.934	0.179 ^b	-0.007
Polity			-0.001	0.001	2.991	-0.008 ^c
Education		-0.009 ^c			-0.047 ^c	0.003
Gender parity in secondary education	0.219 ^b	0.021 ^c			0.060 ^c	-0.088 ^a
Manufactured imports (percentage of total imports)	-0.001 ^a					
Employment industry (percentage of total employment)			-0.003 ^b			
Industry, value added (annual percentage growth)	-0.004 ^a	-0.009 ^a				
Logistics Performance Index	-2.724 ^b		-0.091 ^b	0.023 ^b	0.492	0.007
Official Development Assistance (percentage of GDP)			0.001	0.001 ^a	-0.003 ^a	0.006 ^b

Variables	CEN-SAD	ECOWAS	COMESA	IGAD	SADC	AMU
Inflation				- 0.080	-0.002	- 0.069 ^a
GDP growth	- 0.001 ^c		0.009 ^a	0.011 ^b	- 0.006	
Market size		0.012 ^b				
Industry, value added (percentage of GDP)	0.003 ^b		- 0.004 ^a			0.003 ^c
Fisher Test (p_value)	0.021	0.000	0.000	0.000	0.000	0.000
Sargan test (p_value)	0.161	0.250	0.534	0.142	0.105	0.105

Abbreviations: AMU, Arab Maghreb Union; CEN-SAD, Community of Sahelo-Saharan States; COMESA, Common Market of Eastern and Southern Africa; EAC, East African Community; ECOWAS, Economic Community of West African States; IGAD, Intergovernmental Authority on Development; SADC, Southern African Development Community.

Note: The significance of the coefficients at the 1 per cent, 5 per cent and 10 per cent levels are portrayed as $p < 0.01$ (c), $p < 0.05$ (b) and $p < 0.1$ (a), respectively.

5. Conclusions and policy implications

The study has been aimed at contributing to the understanding of the drivers of intra-African investment at the continental, subregional and regional economic community levels. The research reveals that three sets of variables clearly determine the dynamics of intra-African investment. First, trade openness appears to have a positive and significant impact on investment. This result corroborates what is established primarily in the literature that inward FDI openness tends to have a significant association with both backward and forward integration. From this perspective, countries may need to consider that boosting intra-African investment could also bolster the regional integration agenda at the regional economic community level and provide opportunities for alignment with the continental integration agenda. Second, quality and the development rate of infrastructure are key to explaining investment inflows. Lastly, the performance of trade logistics and the business environment have a bearing on attracting investment. From a policy perspective, these results point to both industrial and trade policies having the potential to boost investment in Africa, if properly designed. This is consistent with ECA research that shows that the benefits brought by enhanced intra-African trade through the African continental free trade area can offer better opportunities for industrialization (Economic Commission for Africa, 2015 and 2016).

Because intra-African investment varies considerably throughout the subregions and regional economic communities, the study has also considered the specific drivers within the regions. African countries portray various levels of development and are engaged in multidimensional integration processes lead by the regional economic communities. This heterogeneity could explain why each region has its own specific intra-African investment drivers.

Given the evidence presented on the complementarities between trade and investment in Africa and considering the trade potential of the African Continental Free Trade Area and its likely implications for boosting intra-African trade, African countries need to harness the initiative as a platform to also boost intra-investment. While boosting intra-African trade through the Free Trade Area will increase productivity, enhance competitiveness and support economic growth, it needs to be complemented by investment regulation and policies that unlock the associated joint benefits of trade and investments growth. It is therefore prudent to also develop common rules on investment in the context of the Free Trade Area, such as the proposed investment chapter, to lock in the expected dynamic and static effects of trade and investment flows within the continent. At the regional level, efforts should be allocated to target these effects from a policy perspective. For example, it has been shown in this report that targeted policies to unlock the benefits relating to trade openness could also be harnessed to help countries attract more market-seeking investment.

There is strong evidence supporting the notion that greater industrial trade on the continent may further attract investment, thereby promoting opportunities for vertical integration and value addition, which, in turn, may address the binding supply side constraints that are preventing Africa from better integrating into regional and global value chains. In this regard, efforts must be made to implement the Action Plan for Boosting Intra-African Trade, given that it is also strategic in achieving Africa's global insertion into the world economy, while maximizing the expected gains from the African

Continental Free Trade Area. It follows that African economies should support their manufactured and industrial sectors to boost intra-African investment through industrialization for a better inclusion into regional value chains. Industrialization is also a key channel for structural transformation in the continental development aspirations, enshrined in Agenda 2063 and in the global aspirations set out in the 2030 Agenda. Furthermore, the importance of industrialization is recognized in various continental initiatives, such as the Action Plan for Accelerated Industrial Development of Africa and the Programme for Infrastructure Development in Africa.

The findings of the study also point out the importance of a conducive business environment and trade logistics to attract greater intra-African investment. In addition, the study's findings also confirm that boosting intra-African investment flows, especially in the industrial sector, could promote economic transformation and diversification. African countries wishing to scale up their economies' growth by raising their total factor productivity therefore need to pursue policies that improve their business environment and enhance their logistics performance.

Given the positive relationship between education and FDI inflows observed in the study, African countries are encouraged to target specific training and vocational programmes to increase labour skills and scale up the know-how of their labour force. In addition, higher levels of education alone do not always benefit young people, owing mainly to a mismatch of skills provided by higher education and those required by the industrial sector. This has resulted in high levels of unemployment among educated young people, in particular in North Africa. Increasing the quality of education and vocational training and aligning these with the needs of African enterprises will therefore be essential to raising productivity in all the sectors of the economy and provide opportunities for those who are marginalized from the job market.

Equally important will be improving the quality of and access to education, given that this will contribute to increasing the attractiveness of African economies and boost intra-African investment and promote technology and knowledge transfers. It is critical to encourage the participation of women and men in the formal labour market to maximize the expected effects of intra-African investment. In this perspective, promoting greater inclusiveness through national strategies for young people and committing to developing a regional strategy for employment is critical. In the context of the African Continental Free Trade Area, this would also allow for greater flexibility and better planning of factor market mobility, an element that could also be incorporated into the ongoing negotiations on the movement of persons to ensure that Africa generates the jobs necessary for the growing population of young people entering the labour market annually.

Domestic and regional investment remains critical to achieving economic growth. For example, investment laws should list priority investment sectors, including manufacturing, and offer incentives to regional investors. These sectors, rather than commodities, offer greater opportunities for regional integration, as well as more strategic entry points at the higher levels of regional and global value chains. Under conducive investment policies and regulations, imports of goods and services used for investment projects could be exempted from duties and value-added taxes. Most important, African Governments should also be financially involved in infrastructure development costs associated with investment projects. These reforms could be a step in the right direction to attract regional investment inflows, while being more selective about sectors and strategic about policies.

These reforms could pave the way for, but crucially need to be reinforced by, deeper regional integration. The continent should try to take advantage of transboundary investment opportunities, which benefit the subregions and regional economic communities. For example, if regulatory reforms are complemented by policies for public-private partnerships and blended finance that target investment for technology and innovation at the transboundary level, African countries could benefit significantly from the spillover effects of intra-African investment. In this regard, the African Continental Free Trade Area could also be explored to serve as a platform to promote continental policies and regulation on investment that cater to this dimension.

Intra-African investment also has the potential to better integrate the continent's regional value chains by relocating labour-intensive activities to Africa, including in manufacturing. This study underscores the importance of continuing to develop infrastructure to eliminate existing binding constraints on both the demand and supply side. These objectives are compatible and mutually reinforcing, given that they would ease African investors' entry and allow them to tap into a larger goods, services and factor markets, while contributing to industrial transformation. Further integration, trade openness and regulatory predictability would send a powerful message to the African business community to invest in such activities to gain access to larger markets, while supporting Africa's industrial transformation.

Furthermore, promoting the private sector is also a key challenge to sustain the attractiveness and competitiveness of African markets, and its contribution to economic growth and employment remains crucial. The financial sector therefore has a key role to play in supporting the private sector. In the same vein, there is a need to strategize on the design of the financial sector architecture, both at the policy and institutional framework levels, so that proactive financial sector policies may be developed to harness and boost intra-African investment.

Lastly, small and medium-sized enterprises are widely recognized as one of the catalysts of Africa's economic growth, employment and poverty reduction. Indeed, they create some 80 per cent of total employment and contribute to more than 50 per cent of GDP on the continent. They therefore play a critical role in driving economic transformation and long-term growth, and African countries should create a business-friendly environment for their development. From that perspective, targeting investment flows to the development of small and medium-sized enterprises could have a positive impact. The African Continental Free Trade Area can constitute a vehicle to achieve these goals, provided that common rules for financial services actively support the development of small and medium-sized enterprises.

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Table: Descriptive statistics of the main regression variables for Africa and by region, 2002-2014

Variables	Africa			East Africa			North Africa			Southern Africa			West Africa		
	Obs	Mean	ST Dev	Obs	Mean	ST Dev	Obs	Mean	ST Dev	Obs	Mean	ST Dev	Obs	Mean	ST Dev
FDI/GDP	213	10.75	14.68	60	10.7	7.18	52	0.63	0.86	65	19.6	21.19	33	9.94	10.21
Market size				91	0.03	0.03				52	0.04	0.07			
Trade openness	253	20.19	10.84				52	18.9	12.08	57	21	8.94			
ODA/GDP							70	51.9	49.13						
Mobile subscriptions per 100 people	286	41.37	36.09				78	41.7	36.31						
Electricity per capita	286	1E-04	1E-04				52	0	8E-05				52	0	8E-05
Inflation							52	5.73	5.73						
Average tariffs on imports	286	14.53	2.62	91	7.21	1.79	52	6.15	0.89				52	6.89	1.06
Polity	273	3.13	4.67	91	2.05	3.79									
Gross fixed capital formation (percentage of GDP)	252	22.03	10.52												
GDP growth				91	6.02	3.79				58	48.1	26.19			
Education secondary level	218	50.5	25.74	73	31.2	11.5	52	77.7	14.66				34	54.8	22.95
Gender parity in secondary education	188	1.67	3.08	73	0.84	0.12				45	4.14	5.65			0.32
Manufactured imports (percentage of merchandise imports)	254	62.33	10.44	76	65.2	6.44	52	64.3	9.68						
Manufactured value added (percentage of GDP)				74	8.13	3.53									
Industry value added (annual growth)				83	7.8	5.84				78	5.41	5.76			6.09
Employment in industry (percentage of total employment)	81	20.27	10.02				35	24.4	5.04						
Logistics Performance Index	260	2.39	0.43				52	2.6	0.39	78	2.32	0.22			

Source: Author calculations.

Note: Obs is the number of observations; Mean, the mean value; and Dev, the standard deviation.

