

The State of African Cities 2018

The geography of African investment



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At UN-Habitat, the publication was coordinated by Joseph Maseland, Mathias Spaliviero, Katharina Rochell and Paula Pennanen-Rebeiro-Hargrave, who were assisted by Monica Gakindi and Jessica Mundia.

Lead author, Professor Dr. Ronald Wall, of IHS Erasmus University and the University of the Witwatersrand, Johannesburg, coordinated and carried out the research and the drafting of the chapters.

General studies were developed by Ronald Wall (*The Economic Geography of African FDI*) and Canfei He and Shengjun Zhu (*China's Foreign Direct Investment into Africa*).

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The following Board members attended the meeting: William Asiko, Chief Executive Officer, The Investment Climate Facility for Africa; Edlam Yemeru, Chief, Urbanization Section, UNECA; Alioune Badiane, Director (Rtd), Programme Division, UN-Habitat; Le-Yin Zhang, Senior Lecturer and Director of MSc in Urban Economic Development at the Bartlett Development Planning Unit, University College London (UCL); and David Thomas, Gender Equality Unit, UN-Habitat. Board members Tom Scott, Chief Economist, City of Johannesburg and Gulelat Kebede, a lecturer and researcher on urbanization and economic development, submitted their detailed comments in writing. Further meeting participants were Ronald Wall, Joseph Maseland, Mathias Spaliviero, Katharina Rochell and Jessica Mundia.

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Foreword

UN-Habitat



This *State of African Cities 2018* report is the fourth publication on Africa in UN-Habitat's Regional State of the Cities report series. It follows a first report, published in 2008, that benchmarked urban issues in Africa. The subsequent 2010 and 2014 publications revealed that Africa should identify its own form of urbanism, rather than following the urban paradigms of the advanced economies in the 1950s and 1960s. Instead, African cities need to adjust to the very different realities of the early 21st century.

This report differs from the traditional series and is not about urban planning. It follows the Addis Ababa Action Plan of Financing by seeking to outline how Africa can consider financing its development strategy through foreign direct investment (FDI) in African cities.

In seeking to address how to boost African urban economies, the report sheds light on how to foster the

urban dimension of Africa's structural transformation with industrialization as the main vehicle for inclusive growth.

The research conducted for this report is highly empirical, rigorously evidence-based and provides never-before seen data and information. It links urbanization to sustainable national development by providing credible options for poverty and unemployment alleviation, highlighting the role of FDI in creating new economic activities, and the contribution of partnerships between the public and private sectors to urban investment and the creation of decent jobs.

At the same time, the report shows that FDI can exacerbate inequality unless governments harness it correctly. In this regard, the report critically considers the benefits of FDI into job-rich and higher productivity sectors (e.g. IT and manufacturing) compared to capital intensive sectors with limited value addition (e.g. resources). The report also shows that African governments need to connect FDI attraction to sustainable urbanisation by underpinning it with robust national urban policies, urban planning, and financial and legal systems.

I have no doubt that this report will make an important contribution to our understanding of the current and potential economic role of cities in African sustainable development by providing a perspective on the implementation of the New Urban Agenda.

Finally, I would like to commend the Institute of Housing Studies of the Erasmus University of Rotterdam and the Witwatersrand University of Johannesburg for leading the research. I would also like to thank the UK's Department for International Development (DFID) and the African Development Bank (AfDB) for their financial sponsorship and intellectual input. In addition, I would like to thank the Government of Norway for its long-term support to the Regional State of the Cities report series.

Maimunah Mohd Sharif
Executive Director of UN-Habitat

Foreword

IHS-Erasmus University Rotterdam



Several years ago, I attended an IHS graduation ceremony in Nairobi, together with Professor Ronald Wall who gave a keynote speech at the event on foreign direct investment (FDI) flows into global and African cities. The presentation was enthusiastically received by Mr. Alioune Badiane, who at that time was the UN-Habitat Head of Projects and who initiated the idea of developing a State of African Cities report, on the position of African cities within international investment flows. The idea was welcomed by Dr. Jos Maseland, the developer of the UN-Habitat State of African Cities Report series, and Professor Wall, economic geographer at the IHS-Erasmus University Rotterdam and Wits University Johannesburg. The report was further complemented by the work of Katharina Rochell and Mathias Spaliviero.

I would therefore like to commend UN-Habitat and IHS-Erasmus University for a very successful partnership,

and especially the core team mentioned above for developing a very timely and important global report. Besides this, I also commend the many other collaborators and researchers at UN-Habitat, IHS-Erasmus University and other universities and institutions, who have contributed to this report. I am also pleased to state that more than half of the researchers of this report are of African origin, an encouraging development which I strongly endorse.

The advancement of African cities is not only important for the continent's future, but arguably for the entire world. For this reason, the report's studies have explored African cities as integral components in an evolving world system. The analyses explore the effects of past FDI on different African locations e.g. inequality, employment and food security, as well as the factors desirable to make African cities more attractive to future investors e.g. good governance, infrastructure and regional integration.

The report shows that although Africa receives a modest share of global FDI, it has the second highest investment growth rate, when compared to other world regions. Much of this growth is triggered by Africa's rapid urbanization and modernization, and it is therefore a continent of great developmental opportunity. However, this will require trustworthy, equitable and sustainable partnerships between local and regional stakeholders and foreign firms. Once this is established, the integration of African cities into the global economic network will expectedly boom. However, this cannot only be at the service of growth but more importantly must also promote social, economic and environmental inclusion. To understand this complexity will require a lot of research, of which this report contributes a modest part. We therefore hope that the results of the report inspire future collaborations to take this endeavour further.

Kees van Rooijen

Director of the Institute of Housing and Urban Studies,
Erasmus University Rotterdam

Foreword

African Development Bank



It is with great pleasure that I introduce this report produced by UN-Habitat, and co-financed by the African Development Bank, using extensive research by the Witwatersrand University of Johannesburg and the Institute of Housing Studies of the Erasmus University of Rotterdam (IHS-Erasmus).

With a population of over 1.2 billion and a combined GDP of USD3.4 trillion, Africa is an attractive destination for foreign direct investment (FDI), which amounted to USD56.5 billion in 2016. Moreover, Africa's rapidly growing population is increasingly living in cities with the continent's urban population expected to reach 50% by 2030, up from 36% in 2016. Benefiting from economies of scale and agglomeration, African cities are becoming the drivers of economic growth and productivity.

The report looks at how Africa can finance its development strategy through FDI in its cities. It argues

that African countries should find the best trajectories for their development, taking into account their country and city-specific locational advantages in attracting public and private investment. Specifically, the report discusses three main types of FDI: resource seeking, market seeking and efficiency seeking. Cities play a major role especially in the latter two, and African cities should position themselves to seize the many opportunities available in the global economy.

Many factors are shaping the future of African cities. I will mention three here.

First, a growing middle class with high purchasing power is driving expansion in addressable markets that can be exploited by market-seeking FDI. The Bank is ready to help finance such investments, with a special focus on intra-African investments that contribute to continental integration.

Second, improving cities' connectivity by air, land, and sea as well as urban mobility will be crucial for attracting FDI. Cities are the gateways to countries, to economic regions and corridors. However, large infrastructure deficits in African cities are preventing them from fully reaping the benefits of agglomeration. Over the past ten years, the Bank has invested more than USD35 billion in infrastructure and will continue to support public and private infrastructure including ports and airports to connect cities to the global economy.

Third, coordination between national and city institutions and between public authorities and the private sector needs to be improved to help cities become stronger magnets for FDI.

I would like to take this opportunity to thank all the partners and researchers involved in this important report. I am especially grateful to the Department for International Development (DFID) as co-sponsor, UN-Habitat for managing the production under its State of the Cities reports series, and IHS-Erasmus and the Witwatersrand University for their dedicated work on the ground.

Pierre Guislain

Vice-President, Private Sector, Infrastructure & Industrialization, African Development Bank

Introduction

The current report follows three earlier State of African Cities reports produced by UN-Habitat in 2008, 2010 and 2014. The 2008 report was a benchmarking exercise reviewing urban and housing conditions in Africa. It told of unprecedented forthcoming urban growth which, at the time of publication, was criticized as ‘alarmist’, but has since proven quite accurate. Given the prevailing conditions in Northern Africa, the 2008 report also warned of political unrest before the Arab Spring unfolded about three years later. The report showed that, in many respects, Africa was not ready for rapidly advancing urban growth, notably in terms of its institutional arrangements and funding priorities, because the continent then still had a sizable rural population majority. The 2010 report delved deeper into the challenges of urban management shortfalls, poverty and mushrooming urban informal settlements (slums). Problematic access to urban land was identified and analyzed as one of the many aspects of deep poverty and socio-economic inequality in Africa.

The 2014 report focused on the social, economic, political, environmental and other transformations unfolding in Africa. It concluded that replicating the urban development examples of the world’s advanced economies of the 1950s and 1960s was no longer a credible sustainable development path. Rather, countries and cities should foster an altogether new ‘African urbanism’ to address the multiple social, political, economic and environmental realities associated with rapid urban population growth. It also showed that there is no ‘one-size-fits-all’ solution.

This fourth report in UN-Habitat’s State of African Cities series parallels the Addis Ababa Action Plan of Financing by seeking to outline how Africa can consider financing its development strategy through foreign direct investment (FDI) in African cities. A common trait today is Africa’s massive investment gap in domestic and urban economies, infrastructure and human resources. The report argues that African nations should search for the best trajectories for their own development, taking into account their country and city-specific locational advantages and disadvantages in attracting more and more equitable international investments from public and

private sources. This should be done with the overarching goal of accelerating Africa’s structural transformation—a large scale shift from growth dominated by the primary sector, to one led by manufacturing, service and knowledge-intensive industries.

The research conducted for this report has made a start by analyzing the determinants that define Africa’s current position with regard to global foreign direct investment flows. It explains the global geography of African investment, why Africa is receiving low FDI inflows, analyzes its relative investment attraction, and suggests strategies to enhance Africa’s global ranking in attracting investment. It further links urbanization to sustainable development by investigating the role of urban FDI in creating new economic activities and the contribution of partnerships between the public and private sectors in urban investment. It concludes that FDI, if guided wisely, can provide credible solutions to urban poverty and unemployment alleviation. At the same time, the report shows that FDI can exacerbate inequality if governments harness it indiscriminately. In line with Africa’s targets of structural transformation and shifting labour out of low-value activities, the report critically considers the benefits of FDI into job-rich and higher-productivity sectors such as IT and manufacturing compared to agriculture and capital-intensive sectors, such as the resources sector.

The report also shows that African governments need to connect FDI attraction to sustainable urbanization and urban policy development, by integrating it with national policies, planning, financial and legal systems, as well as domestic macro-economic policies.

The report consists of three sections.

Part A concerns general analyses and focuses on various aspects of FDI in Africa: structure, trends, forecasts, competitiveness, economic diversity, determinants and impact. Throughout Part A, attention is paid to the policy-sensitive implications for African countries and cities.

Part B, through thematic studies, looks in more detail at FDI. In the printed version we examine income inequality, employment and food security; and in the extended online version, there are also studies on labour



The 2008 State of African Cities report warned of political unrest before the Arab Spring unfolded three years later

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costs, knowledge-based industries, infrastructure, real estate, policy instruments, green competitiveness and smart cities.

Part C explores the FDI profiles of four African cities: Johannesburg and Cairo as Africa's main FDI-attracting agglomerations and investment gateways into the continent; and Abidjan and Kigali as much smaller but dynamic emerging FDI-attracting cities. The overall aim of this section is to analyze how and to what extent public policies can make cities more attractive investment destinations, and how to use FDI for improving economic development. For instance, the four city case studies reveal that cities need to intimately engage with scales of policy making beyond the local level. Urban agglomerations

are critically important for countries to become more attractive to investors given their capacity to diversify the type and nature of economic activities. Cities shape the economic performance of entire countries and regions and should therefore be viewed as constituent parts of regional economies of scale. In advancing the economic development of the African continent, while addressing the high levels of income inequality, unemployment and poverty, the five major African regions, within the remit of their respective regional organizations and the African Union, should work closely together to target different FDI sources worldwide. Attracting global FDI is highly competitive and regional cooperation is critical to boosting individual cities' and nations' negotiation strength.

Executive Summary

In recent years, especially after the 2008/9 financial crisis, there has been a steady increase in foreign direct investment (FDI) towards the Global South. This has been a welcome trend for Africa, not only because of its developmental challenges but also because of the generally limited availability and cost of domestic financing, which has persistently hampered African business. Nonetheless, despite a growing FDI influx, Africa's share of total world FDI volume remains small, at roughly 5%. This compares poorly to the continent's 15% share of global population and over 30% of world poverty. The current GDP per capita gap, relative to other world regions, is likely to widen if 'business as usual' is to continue.

There is a clear and pressing need for increasing foreign investment in Africa. Financial and policy interventions are needed that support Africa's emerging transformations and strengthen its already unfolding shift from FDI in the primary sector (resources), towards secondary and tertiary sectors (manufacturing, services and hi-tech). Such interventions would facilitate structural economic transformation and generate higher value-added economic activities. FDI is a key resource to expedite Africa's growth potential, since it promises to bring not only financial resources but also new technologies, knowledge and expertise. Investment promotes employment, productivity and competitiveness through entrepreneurship in investment destinations. Substantial private capital injections can, for instance, help close Africa's huge gap in physical infrastructure, improve the quality of the built environment, and make the continent a more attractive destination for global FDI.

Key findings

Cities perform a quintessential role in Africa's evolving structural transformation because urban environments facilitate growth in critical economic sectors. Cities can accommodate industries that have already demonstrated sustained economic growth from 2003 to 2016, a trend which is anticipated to continue. African cities can boost their economies by positioning themselves as desirable destinations for multinational firms' headquarters, sub-offices and other activities, and thereby become important nodes in corporate strategies. However, it is pertinent that,

as potential FDI destinations, cities should understand the rationales of investors to expand business to foreign countries. In the age of globalization and the emerging fourth industrial revolution, the role of African cities and urbanization must reverberate in the long-term economic, spatial and demographic planning of the continent. This role of cities is expressed in Agenda 2063 of the African Union, the United Nations' New Urban Agenda, UN-Habitat's State of African Cities reports and the World Bank's *Africa's Cities* report, among others.

Under conditions of rapid urbanization, African cities bring both problems and solutions in respect of the incidence of urban poverty. In the absence of commensurate economic growth, in urban and rural economies alike, urban poverty has become proportional to the rate of urban-rural migration and natural urban growth. Conversely, urban economic development can lift millions out of poverty, as it has done in East Asia over the past three decades, with African cities becoming hubs of productivity that accelerate economic growth and general well-being. For this to happen, African cities need to seize a more prominent position in the world economy, by enhancing their accessibility, connectivity, markets and urban attractiveness. They also need to rapidly build workers' skills and productive capacity, available

African cities need to seize a more prominent position in the world economy, by enhancing their accessibility, connectivity, markets and urban attractiveness

knowledge and technology levels, as well as inclusive institutional and business capacity. FDI can serve as an important means to kick-start this.

Despite its relatively low ability to attract FDI in comparison to other continents, the recent rate of FDI growth into Africa is the second highest in the world. While this is partly explained by the low investment base from which the continent started, it does demonstrate



Key aims of stimulating investment into Africa are to decrease the proliferation of informal settlements and secure urban food, water and energy supplies

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a growing interaction between Africa and the global economy. Indeed, FDI is now an important source of finance, and represents roughly a third of foreign financial sources flowing into the continent.

Furthermore, the better a city is globally and regionally connected to businesses and cities around the world, the more FDI it will attract in future. Cities have stronger economies when they facilitate international trade and connect to diverse economic clusters in the world, thereby boosting their own local markets and industries. African cities should develop strategies to become key nodes for production, services and knowledge in the global marketplace. Spatial policies such as industrial zoning are conducive to this because these help create opportunities to tie often peripheral parts of the city to the rest. These policies also stimulate the development of physical infrastructure and social capital, while ICT promotion supports improved urban accessibility and connectivity. Key aims should be to facilitate urban employment and poverty reduction, to decrease the proliferation of urban informal settlements (slums) and to secure critical urban food, water and energy supplies. Furthermore, in the

context of food security, Africa's urban revolution will arguably have to run parallel to an agricultural revolution.

However, FDI is neither a panacea, nor the ultimate answer to Africa's development, since it has both positive and less helpful effects. Commonly recognised negative aspects of FDI in developing economies are its potential for crowding-out local businesses; its tendency to be consumption and not production driven; the fact that it is generally directed towards production for non-African markets; and its adverse effect on wage inequality and the development of indigenous skills in certain sectors. Therefore, careful choices should be made by cities in their pursuit of new and additional FDI, towards inclusive economic growth.

Analysis of FDI into Africa

FDI structure

Western Europe is the largest investor in Africa, followed by Asia and then North America. Geographic proximity is an important locational preference for multinational firms in Africa, most likely because of cultural and language similarities, and because proximity lowers the transaction

costs of foreign ventures. There are four major urban FDI destinations in Africa: Cairo in Northern Africa, Lagos in Western Africa, Johannesburg in Southern Africa and Nairobi in Eastern Africa. Central Africa lags behind the other regions in terms of FDI, although Kigali—situated in Eastern Africa, but bordering the central region—shows strong upward growth in attracting FDI. Only a few African cities e.g. Cairo, Lagos and Johannesburg, hold the financial power to also be sources of FDI (outward investors), that is, there are firms with headquarters in these cities that invest abroad, either within or beyond Africa. These cities therefore function as key global FDI gateways within the African continent. Furthermore, these cities can attract foreign investors and offer them a more diversified business climate, including infrastructure, and larger stocks of human capital and consumer markets.

FDI trends

Africa has the second highest exponential growth of inward FDI among world regions and is clearly an emerging global FDI destination. However, evidence of negative investment growth in Northern Africa (commonly perceived as the best performing region) puts African FDI growth into perspective. Whereas major FDI destination countries such as Nigeria and South Africa are still experiencing moderate growth, negative investment growth is observed in other major FDI destination countries e.g. Egypt, which has high investment volume but declining growth. Furthermore, gateway cities are seen to attract FDI from various places around the world, irrespective of geographic distance, or the historic legacy. This report shows that FDI hubs such as Johannesburg, Cairo, Lagos, and Nairobi are noteworthy players in global FDI markets (in terms of volume), with emergent FDI cities like Abidjan and Kigali also doing well (in terms of growth).

Of the four aggregate industrial sectors explored in this report (i.e. manufacturing, services, hi-tech and resources), FDI in hi-tech and manufacturing offers both superior FDI growth rates and the highest number of direct jobs. Indeed, the four city studies in Part C show that these cities are key investment hubs for hi-tech and manufacturing, due to their ability to absorb new technology, the availability of highly skilled human capital and their institutional governance capacity. In many cases, these flows of FDI have reduced income inequality and generated jobs. While hi-tech has the highest FDI growth rate, manufacturing FDI has the largest share of investment in Africa. Also it should be noted that the

hi-tech sector is closely linked to manufacturing FDI activities, stimulating backward and forward linkages between each other. Manufacturing FDI is currently the most important in terms of employment generation, although the hi-tech investment sector is catching up. Both sectors are shown to reduce income inequality, if local skills (absorptive capacity) and institutional qualities are adequately in place. The primary sector (agriculture and resource extraction) has shown negative FDI growth rates throughout the African continent.

FDI forecast

Overall, FDI growth in African countries and regions is likely to continue over the next few years, although it is uncertain whether this growth will be sustainable. Possibly because of the 'lock-in' of public investment in resources, FDI diversification is held back and more urban-oriented sectors are being frustrated. Therefore, attracting FDI in manufacturing, service, hi-tech and knowledge industries should complement and enhance investments in agriculture and extractive industries. This means investing in cities that promote investment growth sectors like ICT, food, real estate and healthcare, which have done particularly well.

Western and Eastern Africa are likely to experience sustained investment growth. In Western Africa, manufacturing and hi-tech are experiencing the highest growth rates and, indeed, FDI has already reduced wage inequality in this region. Manufacturing will attract the most FDI in the coming years. Nigeria and Côte d'Ivoire will particularly see growth. In Eastern Africa, service investments will see the highest growth rates. Here too, manufacturing investments will grow well, and Kenya is set to experience high growth. Northern Africa can expect stability of inward FDI. Services will replace manufacturing as the most important activity for attracting FDI in this region. Egypt and Morocco will keep their frontline position in attracting investment and regional economic growth. The economic development of Central Africa remains modest in the foreseeable future. Inward FDI in manufacturing and services is projected to remain at current levels, while inward FDI in resources will continue to decline. Rwanda, straddling Central and Eastern Africa, is projected to experience rapid growth and is an example of best practice in the region.

FDI determinants

Inward FDI into Africa correlates positively with large urban populations (markets), trade openness, mobile



The case studies on Johannesburg (above) and Cairo show that urban agglomeration is significant in attracting FDI

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phone subscriptions, internet bandwidth and full electricity supply, amongst other factors. Low wages are shown to not be the key motive for multinational firms to venture abroad. Rather, they seek cities and countries that sustain large populations, good standards of living, sound financial markets, and competition in terms of producing and marketing exclusive products.

The case studies of Cairo and Johannesburg show that urban agglomeration is significant in attracting FDI. Large urban concentrations, with a diversified workforce, provide the competences that multinational firms seek. That is particularly important for knowledge-based FDI. It is also shown that African capital cities hold an advantage over other cities, due to their above-average skilled workforces and technological readiness, coupled with adequate administration (i.e. land use rights), and the availability of relevant information (government agencies, interest groups, firms). These factors combined with high-quality ICT and lower transaction costs enhance FDI attraction for multinationals.

Such firms are attracted to destinations with large domestic markets because these provide higher returns on investment, through a more efficient use of resources. Furthermore, these destinations generally perform better in terms of gender parity across industrial sectors. Compared to other continents, women in Africa are underrepresented in formal sectors that are anticipated to become highly significant. A further determinant for inward FDI is the trustworthiness of public authorities and associated civic stability and institutional safeguarding of investor interests (such as the enforcement of property rights). Access to local credit is similarly important for attracting FDI because it strengthens private-sector initiatives. Finally, mature democracies, which are generally more business transparent and open to inclusive growth, perform well in attracting FDI, with presidential democracies performing better than parliamentary ones. In light of this, our research shows that the existence of presidential systems improves the

reliability and accountability of public institutions, encouraging further FDI.

Multinational firms have various strategic motives to expand their operations abroad. An expected growth of domestic markets and geographic proximity to markets or customers in the destination environment are key motives for firms across the globe to expand into Africa, as are a wide number of other incentives including: the availability of skilled workers, regulations and business climate (related to trustworthiness); advanced infrastructure and logistics; proximity to local industrial clusters (e.g manufacturing or hi-tech); the presence of effective investment promotion agencies (IPAs) and other forms of government support; good credit ratings by international agencies; smart procurement strategies; availability of natural and human resources; lower costs (i.e. lower overhead); cultural attractiveness; quality of life; availability of local technology and innovation; and proximity to innovative local universities and researchers.

FDI impact

All FDI sectors have a positive impact on gross national income (GNI) per capita, except the resources sector. This shows that public authorities can foster higher GNI per capita by accommodating inward FDI in manufacturing, services and hi-tech. An often-overlooked impact area is inequality in income distribution. Our studies show that FDI's impact on wage inequality is mediated through local conditions such as the human capacity to absorb new technology, the availability of human capital, the presence of local technology, and the quality of governmental and private institutions.

At the sectoral level, hi-tech and manufacturing FDI are shown to be the most important in reducing income inequality, while resources and services FDI do not have a significant impact. This means that cities will only experience a decrease in income inequality, when locally available technological skills are strengthened, adequate ICT infrastructure is provided, a robust and reliable electricity network is in place, and good-quality local firms are available.

Institutional capacity showed mixed results in resolving income inequality. On the one hand, strength in auditing and reporting tends to reduce firm-level corruption and protects workers leading to lower income inequality. On the other hand, intellectual property rights potentially block the diffusion of new technology. In such situations, FDI benefits only a small group of highly skilled beneficiaries.

Manufacturing FDI is shown to be the most important sector for employment generation, since it generates the highest number of direct jobs. Consequently, attracting and generating manufacturing jobs is crucial for the economic transformation of Africa.

Although Africa receives a large share of FDI in the food sector, this does not contribute to food security in the continent since food FDI is generally geared towards the export of raw agricultural products, rather than value addition and serving local markets. Furthermore, this type of FDI is mainly extractive and does not generate sufficient jobs.

China's investments in Africa

China's relationship with Africa has changed from one driven by Mao Zedong's ideology that sought to promote and support anti-colonial movements towards one of international trade, development assistance and more recent interventions, through Chinese FDI. In this context, there are polarised views on China's investment in Africa,

Manufacturing FDI is shown to be the most important sector for employment generation, since it generates the highest number of direct jobs

with some asserting that it is exploitative, merely seeking resources, or even an outright form of neo-colonialism. In cooperation with Peking University, and based on the latest Chinese data, the investment trends of Chinese State and non-State Operated Enterprises (SOEs and non-SOEs) were analyzed for this report.

The studies show that Chinese investment in Africa is broad and complex and that it may be too early for sweeping and generalized judgements. Through a range of examples, the research shows that Chinese investment in Africa is diverse and the investment motives appear to be market-oriented (seeking new markets, profit and cheap labour) alongside the exploration for resources. An interesting finding is that in contrast to conventional FDI theory, Chinese investment in Africa tends to focus on countries with lower political stability so as to explore underinvested states, as well as to avoid competition with investors from advanced economies.

The research shows that Chinese firms have made contributions to African development, particularly in the energy and infrastructure sectors, with the incentive of creating more attractive investment environments and to stake a claim in the economic development of the continent. However, Chinese involvement in Africa mainly focuses on agriculture and the extractive industries, with Chinese multinational firms being particularly export-driven. The results show that benefits are reaped locally through joint ventures, profit sharing with African partners, employment creation, the establishment of training centres and through knowledge and skills transfer. Nevertheless, Chinese firms have a mixed reputation in Africa.

Chinese investment has contributed to social development by generating employment. Yet, caution is warranted on the benefits extended to the local workforce. In many cases, work conditions are questionable, high-level jobs under Chinese investment are mostly occupied by Chinese individuals, while insufficient attention is being paid to corporate social responsibility and environmental matters. The overriding focus of Chinese investment on expedience and profits tends to overlook the interests of local communities.

This is explained to some extent by the fact that Chinese state-owned enterprises (SOEs) and non-SOEs import the customs and standards of corporate culture from China. At the same time, Chinese firms are learning as they go along. But the revealing finding that “China is ready for Africa, but Africa is not ready for China” indicates that this is an area where African governmental policy needs to become proactively developed not only for individual countries but also across regions, and possibly the entire continent.

1. Recommendations

- Public authorities can shape the right kind of social, economic, environmental and policy conditions for an attractive investment climate. However, there is a need for further evidence on the impact of economic policy to help boost the growth potential of Africa. Evidence-based policies should, therefore, consider the diverse impacts of different sectors of FDI on income inequality, direct employment and the quality of employment.
- Economic diversification increases the resilience of FDI destinations. A diversified sectoral landscape can better withstand economic shocks. The most advanced urban economies proliferate in as many secondary and



All FDI sectors have a positive impact on gross national income per capita except for the resources sector



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tertiary sectors as possible and attract FDI from sources across the world. A higher diversity of FDI sectors and intra-sectoral specialization in particular, will allow for greater economic competitiveness and more urban economic resilience. Competition for the same sources of inward FDI into Africa could be rendered zero sum.

- Africa hosts a number of emergent and therefore still relatively fragile FDI destinations. Policy makers should ensure forethought in economic diversification and coordinate collective action amongst FDI destinations, so as to accommodate regional interests in Africa. This implies that economic diversification should go hand-in-hand with continental and regional specialization and the complementary division of labour across geographies.

The most advanced urban economies proliferate in as many secondary and tertiary sectors as possible and attract FDI from sources across the world

- The resources industry is waning in both economic and social significance. Resources fetch lower prices on global markets, than has previously been the case. Direct employment in resource FDI has dropped in tandem with the overall recent decline in FDI. Furthermore, resources generate low added-value for African countries. Resources FDI is at odds with the increasingly important role of cities, in developing robust urban economies, where FDI growth in manufacturing, services and hi-tech takes precedence.
- African countries should particularly focus on attracting investment in labour-intensive manufacturing. Manufacturing can play an important role in African economic diversification, through its backward and forward linkages to other sectors, and by generating a relatively larger number of jobs.

City-level recommendations

- Cities have little to offer to multinational firms involved in primary resources extraction, notably so when food crops or extracted bulk are exported without further processing or refining (local value

addition). In contrast, urban-based investments concentrate on the relatively young and above-average educated working class, the geographic proximity between urban manufacturers and their offset markets, as well as the critical mass needed for service-oriented firms to have a good return on investment.

- Cities should have a relatively high degree of autonomy in shaping their investment environment by accommodating the required locational preferences of multinational firms. At the urban level, African public authorities can establish spatial policies that accommodate the various sectors that multinational firms seek. Such sectors are, amongst others, industrial machinery, warehousing and storage, renewable energy, food, healthcare, communications and real estate. This requires differentiated spatial policies, depending on the type of FDI attracted. For instance, warehousing and storage are likely to thrive in industrial zones with low rents and where accessibility is an important precondition for firms seeking improved efficiency.
- Local authorities should focus on FDI sectors that accommodate economic, social and environmental development (growth and inclusiveness). Economic diversification is key to a balanced trade-off between these categories. For instance, a favourable local investment climate should stimulate capital accumulation in the food sector, in such a way that it sustains local employment, as well as links to related sectors such as ICT, logistics, water and energy.
- To address unemployment, poverty and inequality, hi-tech FDI is a promising growth sector. Urban planners should create technological hubs for hi-tech firms to cluster together and gain agglomeration and economy of scale benefits. Hi-tech has a positive impact on income distribution and inequality, when FDI destinations are endowed with adequate absorptive capacity and better quality institutions. Cities should invest in local technologies and infrastructure to increase their absorptive capacity of foreign technology and enhance the quality of their institutions by reducing corruption and improving transparency and trustworthiness.
- Reliable mobile networks and internet access attract knowledge-based FDI and are important for the growth of the hi-tech sector. Emphasis on inclusive technologies and education also importantly requires the promotion of gender parity in the labour market, and public authorities should ensure the promotion of women in all formal sectors of employment. Furthermore, where human capital (i.e. tertiary education) is concentrated in the higher echelons of society, care should be taken that investment does not increase inequality.
- Manufacturing, the largest industrial class, should focus on cities as its geographic priority. This should build domestic markets and allow for catching up with global commodity markets. Manufacturing should add value to domestic commodity markets, and promote strong backward and forward linkages with the primary and tertiary sectors.
- New technologies are increasingly fusing our physical, digital and biological worlds, impacting all disciplines, economies and industries. With emerging “fourth generation technologies”, multinationals will likely produce more at home again (e.g. through 3D printing). Because African cities are geared towards producing for foreign markets, it will become increasingly important for them to embrace new technologies and become more geared towards advancing their own local high-tech manufacturing and providing their domestic markets by themselves. This is especially important if such cities do not wish to perpetuate their dependence on high-tech goods produced by technologically more advanced economies.
- To support sustainable social development, cities should know when to invest and in which sectors. In this light, the interface between GDP, FDI and income inequality should inspire local policy makers to make the right choices in shaping their urban investment climate. Cities should only target hi-tech FDI, when it is proved to decrease, rather than increase, income inequality.
- To build a robust domestic market, it is imperative that local authorities build on the sectors in which they already have a comparative advantage—or in related sectors that strengthen existing ones. New FDI sources should be found that support domestic firms and enable them to more easily absorb and diffuse new technologies, knowledge and skills brought by multinational firms.

- The ‘Smart City’ concept is a new critical phenomenon in urban development, especially when cities want to expand their global reach. Smarter cities, in this report’s studies, reveal that they are more capable of attracting FDI from more and further destinations. City administrations can therefore set up Smart Procurement Agencies and Competition Commissions, for branding their city as an attractive ‘smart’ investment destination. In this context, it is not only imperative to develop smart cities in Africa but, more importantly, to establish a network (regional and international) of dedicated smart cities that collaborate and share beneficial information and data.
- Inward FDI into a smart city reinforces the financial capacity of city administrations to invest in infrastructure and public transportation systems, by integrating different modalities and functions through ICT solutions. This improves accessibility between the urban core and the regional periphery, and lowers transaction costs for multinational firms. More importantly, city regions need to become more infrastructurally connected and monitored e.g. through advanced roads, rail, IT, and city-region networks, so as to become better connected regionally and across the continent.
- Furthermore, one of the studies shows that the opening up of urban agglomerations to real estate FDI is necessary and requires reducing the often complex and stringent regulations that govern African urban planning, so as to facilitate and promote FDI in this sector.
- Cities that are part of a broader FDI destination, i.e. cities within development corridors, have an investment advantage (borrowed size). For instance,



Food FDI is generally geared to the export of raw agricultural products so it does not contribute to food security

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Johannesburg is part of a corridor that stretches all the way to Maputo (Mozambique). Investors are attracted to such urban FDI destinations because of the linkages to external industrial and agricultural hinterlands, as well as urban core and periphery constellations, which provide much larger access to consumer and labour markets. For instance, the case study of Abidjan demonstrates that this city receives more FDI when its public authorities invest into the West African coastal corridor, and connect better to e.g. Accra and Lagos, which are both major FDI hubs in Western Africa.

- Local policy makers should embrace the digital revolution since this can lower transaction costs for multinational firms operating in their city and corridor. By connecting FDI corridors with small and medium-sized towns and expanding road and rail networks, larger regions will open up and create an expanded market for domestic and foreign products alike. This also helps to expand the economic base of regional towns and can have the additional benefit of reducing population pressure on the larger cities, by spreading employment opportunities to small and medium-sized towns.

Country-level recommendations

- African countries should target investment in renewable energy as this sector generates a larger number of jobs when compared to the traditional energy sector, as well as promoting 'green growth'. Green-competitiveness fits well with compliance towards international carbon reduction targets and is increasingly becoming a concern for multinational firms too.
- Urban managers often consider rural-urban migration as undesirable because it boosts urban populations faster than institutions can cope. However, migrants with basic agricultural skills can be useful in peri-urban farming and food processing sectors, which can help address existing and future urban food insecurity through various forms of urban agriculture and horticulture. Moreover, rather than exporting rural agricultural output, crops can be processed in cities for domestic consumer markets, while utilizing migrant skills and promoting employment. In the report, analysis of FDI and its effect on food security reveals that local authorities must fulfill a catalytic function in attracting investments that improve food security.

- Cities can play a pivotal role in investment in food and food-related sectors (e.g. in manufacturing and food technology). Also, Part B of this report shows that the food sector generates employment. The policies formulated should seek to attract food firms that aim particularly at local markets, technology sharing, cooperation with local firms, economic inclusion and stronger participation of women in the local workforce so as to develop higher food security in African cities and regions. For cities, this can help to address the migration of poverty to cities and the mismatch between the skills of new arrivals, and existing jobs in urban sectors.
- Core and periphery transcend various spatial scales. Governments should therefore develop policy that assigns specific roles to cities e.g. the establishment of dedicated industrial sites and technology valleys. The ultimate goal is to build economies of scale through concerted efforts to utilize FDI.
- Geographic proximity is an important consideration for multinational firms to invest in Africa. Northern Africa receives most of its FDI from Europe and the Middle East, while FDI into Eastern Africa mostly originates from Asia. Countries should, therefore accommodate the locational preferences of multinational firms based on where most of their FDI originates from, so as to retain and strengthen their position as key destinations for investment.
- Inward FDI from China can bring new economic prospects for some African countries, particularly in the Central African region, if countries there manage to provide stronger democracies. Central Africa and also Rwanda and the near-landlocked DR of Congo can attract FDI from China by improving their locational factors and policies.
- Besides checking for absorptive capacity, human capital, levels of domestic technology and institutions, governments should be aware of other issues that affect the relationship between FDI and employment. These variables are, among others, population size, trade openness, and ICT - the latter representing knowledge transfer and information dissemination. Countries with large and well-connected populations (measured for instance by mobile phone subscriptions) are better able to create jobs from FDI. Every

sector requires a tailored approach, contingent on what multinational firms require in their foreign ventures. For instance, in the case of food FDI, governments should invest in agro-business that links up to manufacturing sectors, so that crops can be processed into food for domestic consumption.

Regional-level recommendations

- The five regions of Africa should fashion economies of scale to create an investor climate. Major hubs of FDI attraction are geographically spread across the continent: Cairo, Johannesburg, Lagos, increasingly also Abidjan and, to a lesser extent, Nairobi. In recent years, Kigali has emerged as a new investment gateway for (but not in) Central Africa and offers perspective to this FDI-underprivileged region. The gateway function is particularly pertinent for attracting knowledge-based FDI.

In recent years, Kigali has emerged as a new investment gateway for Central Africa and offers perspective to this FDI-underprivileged region

- Knowledge-based FDI destinations serve as gateways to subordinate FDI hubs in the region. Africa needs to invest in regional infrastructure, both physical and ICT, to boost the impact of this emergent FDI source.
- Regional policy makers should further strengthen interdependence between cities and countries in the FDI corridors. There is, for instance, a need for regional strategies of comparative advantage and complementarity between major urban hubs. The regional blocs should try to join forces in building a stronger intra-regional market for commodities. Better regional infrastructural interconnection combined with customs agreements is critical to achieving this.
- Since inward FDI correlates positively with trade, FDI destinations will expectedly become more attractive when regional trade barriers are lifted, particularly in the case of multinational firms seeking new markets. Regional integration is therefore a good proxy for FDI competitiveness.

- Linking cities, countries and regions through road and rail transportation, will expand market size and is one of the most important factors for attracting FDI. It is therefore especially important for landlocked countries to connect with port cities, through dense road and rail networks.

Continental-level recommendations

- The African Union, as the designated body to establish policy coordination between regional economic blocs and their members, should facilitate collective action on investing in manufacturing, services and hi-tech. Manufacturing has economic spin-offs across the entire continent. Services mark a high growth category, although the economic spin-offs are concentrated in a few countries only. Policy can ensure that benefits are more evenly distributed. Hi-tech is a promising economic growth category, as well as a necessary investment category for Africa to close its technological capability gap.
- The report shows that Africa is already a significant investor in itself and is strongly encouraging investments between cities and countries within the continent. To improve this, it is imperative that major African urban hubs (investment gateways) try to compete less with one another but rather seek diversification to become more complementary, based on their specific locational advantages, interregional cooperation, and the preferences of investors. One way to improve collaboration between African cities is to ensure that cities and regions target different FDI sources and, in some cases, explore different sectors of investment. The African Union could set out a strategy to coordinate FDI attraction efforts across the continent.
- A diversification of economic sectors is needed for FDI destination cities, so as to improve their position as regional and international investment hubs. Economic diversification also increases the resilience of cities against volatile global investment changes across sectors.
- An obstacle experienced in developing this report but common to many studies on Africa is the extreme paucity of data, especially at the city level, or lower levels of aggregation. There is a serious need for high-quality, comparative and accessible data (quantitative and qualitative). Urban, regional and continental policy can only be developed in an



Reliable mobile networks and internet access are key to attracting knowledge-based FDI and for the growth of the hi-tech sector

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informed manner when based on scientific evidence. It is therefore imperative that African continental, regional, national and municipal institutions invest in and support accessible high-level data collection, as well as stimulating advanced analytical methods and technologies, enabling African researchers in particular to carry out appropriate analysis.

- African countries' comparatively weak negotiation position vis-à-vis the world's powerful regional political and economic blocs and multinational corporations, is to a large extent attributable to a lack of cooperation amongst African nations, due to internally divided approaches, language and cultural barriers. This has inevitably created the current scarcity of regional infrastructure, restrictions in transboundary movement of people, goods and finance, as well as too few customs and migration agreements, which are all critical components in developing the continent's potential FDI attraction. These negative traits forfeit the powers that can be found in coordinated and common approaches.
- There is therefore a need for the AU, Africa's sub-regional cooperation associations, and individual nations to overcome major hindrances to 'acting as one', even though the associated political, economic and institutional challenges to be overcome are significant. Early progress in this respect is critical to creating optimal investment environments in the interest of all African nations and their cities.

Global-level recommendations

- International organizations can expedite investments into Africa by, for instance, financing regional infrastructure that helps improve the free flow of goods, finance and labour across African regions. Every African sub-region has at least one major urban and economic development corridor and the international community could help boost the further development of infrastructure connections between major FDI hubs and other cities within and among the African sub-regions. Gender parity in participation in the labour market is important for attracting FDI in secondary and tertiary sectors. Africa therefore needs to foster greater gender parity and the international community can assist with this. While African women represent a relatively high share of the total workforce, they remain relatively underrepresented in the very formal economic sectors expected to grow over the coming

Food security coincides with investment in technologies, innovation, logistics and services in the food sector in all African countries and cities

decades. Equal participation of men and women adds knowledge, skills and value to the labour market.

- Food insecurity is an often-underestimated problem emerging on the African horizon. It plays out at several scales. Rural, urban, regional and global forces meet at the frontier of feeding Africa's urban and rural millions through investment. International organizations should make African food security, and urban food security in general, a key priority.
- Africa has huge food-producing potential with highly arable land and 60% unemployed youth. But Africa still needs an 'agricultural revolution', which should go hand-in-hand with its rapid urbanization. The current negative stigma of poverty and subsistence agriculture needs to be changed into one of medium and high-technology food production. Besides feeding itself, Africa could create a surplus to feed other parts of the world, stimulating much needed export revenues, rather than the currently prevailing international food exports and land exploitation. This will require a new strategy for food FDI in Africa and partnerships with local authorities to stimulate capacity building, new technologies and job creation through industrial food production.
- Food security coincides with investment in technologies, innovation, logistics and services in the food sector in all African countries and cities. Urban FDI hubs should serve as the vehicle for attracting FDI from different sources. This can make cities robust and resilient to international market shocks. International organizations could help promote the governance required to attract multinational firms in the food sector. With the right policy choices, Africa may not only be able to achieve internal food security, but also deeply integrate itself into the global economy. By trading food products and contributing to improving global food security while strengthening its own national economies, it can generate much needed employment, lower income inequality and more broad-based well-being for its people.

Part A | Chapter 1

The Economic Geography of African Foreign Direct Investment

By Ronald Wall

Solar panels in the Salmonsdam Nature Reserve, South Africa. The huge potential for renewable energy has yet to be exploited leaving 645 million Africans with no access to electricity
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1. Introduction



Improving the quality of life of Africans through the creation of millions of jobs was one of five key objectives announced by Akinwumi Adesina, President of the African Development Bank, in his inaugural address in 2015

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1.1. Africa's development agenda and the need for foreign investment

Over the past two decades, most African economies have grown rapidly and, continent-wide, extreme poverty declined from 56% in 1990 to roughly 42% in 2015. Huge improvements in economic policies, advancing political stability and enhanced business environments have all made Africa increasingly attractive to foreign direct investment (FDI), which amounted to USD56.5 billion in 2016 (African Development Bank (AfDB) 2016).

However, despite these achievements, poverty remains a major challenge, especially given the continent's rapid population growth. In 2015, an estimated 400 million Africans were still living in poverty. Income inequality is escalating, youth unemployment is intensifying, and gender inequality persists. Africa's development performance clearly remains highly vulnerable to the impact of changes in the global economy, such as the recent world recession, Brexit, political turmoil in the USA and economic changes in China.

Africa's strong development potential has not yet been utilized in most sectors. For instance, despite a massive agricultural potential, many African countries remain highly food insecure, spending billions of dollars on the import of food while, at the same time, large amounts of agricultural products are being produced and exported by foreign firms through international land outsourcing arrangements to feed people elsewhere in the world. Having said that, Africa holds 65% of the world's arable land, could generously meet its own food requirements and, under the right policy interventions, could possibly feed the entire planet by 2050.

Likewise with energy. Approximately 645 million Africans have no access to electricity because the continent's enormous renewable energy potential remains essentially unexploited. Industrialization efforts have not been very successful, mainly due to poor policies and ineffective financial and support services. Policies to harness the private sector and domestic and foreign direct investment (FDI) could facilitate access to finance for innovative enterprises, incentivize entrepreneurship and provide more conducive business environments to stimulate industrial impetus.

In the context of the above, improvement of the quality of life for people in Africa is one of the new five key targets for 2025 of the African Development Bank. This includes the creation of millions of new jobs to help lift a majority out of extreme poverty. This aim is said to require various forms of financial intervention with the attraction of FDI as one of the key actions. New and additional FDI will be critical because inadequate public funding in many African countries is not able to kick-start industrialization processes. Foreign firms and investors could, in future, play a catalytic role in African development, if guided by truly sustainable policies. This type of development would be in accordance with the 2013-2022 strategy of the African Development Bank (AfDB) which emphasizes, on the one hand, the promotion of inclusive growth and, on the other, the transition to green growth. FDI into renewable energy can be used to achieve this target because besides producing clean energy, it generates a lot of employment. A key aspect of the AfDB's strategy is development of financing from the private sector, including FDI.

The African Union (AU Agenda 2063) holds similar aspirations, as expressed in its first target: "Prosperous, inclusive and sustainable development

for Africa". Both these organizations' aims are fully compliant with the first UN Sustainable Development Goal: reduction of poverty.

According to the *Economic Report on Africa* (UNECA, 2017) the need for finance to support Africa's transformation "agenda is enormous". Just to close Africa's financing gap in infrastructure, some USD94 billion in annual investment is required over a ten-year period (WEF, 2015). Furthermore, Africa's total debt has increased steadily and is forecast to reach 32.4% of continental GDP by 2017, which raises concerns for Africa's long-term debt sustainability.

Various African, continental, regional and national strategies, e.g. the Plan of Action for the Accelerated Industrial Development for Africa (AIDA) in 2008 and the AU's Agenda 2063 have stated the importance of industrialization and attracting FDI, especially for manufacturing, to bring essential capital, technology and expertise to the continent. Because of the inadequate resources in many African countries to finance industrial development, attracting FDI is vital to igniting industrialization and bolstering industrial diversification, via knowledge and technology transfers, and for stimulating productivity and export

Because of the inadequate resources in many African countries to finance industrial development, attracting FDI is vital to igniting industrialization and bolstering industrial diversification, via knowledge and technology transfers, and for stimulating productivity and export performance

performance (African Development Bank Group, 2017; UNECA, 2016). Because Africa is experiencing some of the highest urbanization rates in the world (UN-Habitat 2008 and 2014) and because FDI into Africa is rapidly growing in secondary and tertiary sectors, it implies that FDI into Africa must increasingly be located in cities where such sectors typically thrive.

The century from 1950 to 2050 is 'the global century of urbanization' during which, broadly speaking, the global population will transform from a 70% rural to a 70% urban population majority. This

is an accelerating process in the two global regions that are relative late entrants in this transformation: Asia and Africa. Various studies e.g. UN-Habitat's *State of African Cities 2008, 2010 and 2014* reports, show that African urbanization rates far exceed initial expectations. Others (e.g. Global Cities Institute, 2014) project that several African cities could become some of the largest in the world. The high rates of urbanization are today not merely attributable to large-scale rural-urban migration but, as urban populations grow, natural growth plays an increasingly important role in Africa's urbanization.

Rapid urbanization in Africa often results in the urbanization of poverty and manifests itself in mushrooming urban informal settlements (slums) (UN-Habitat's *State of African Cities 2014*). In this light, the World Bank's 2017 *Africa's Cities* report identified three features of African cities that restrict urban development. Firstly, African cities are crowded but not economically dense, meaning that physical, industrial and commercial structures have not developed in parallel with the fast-growing populations. In short, African urban population growth is significantly outpacing urban economic growth.

Secondly, African cities are generally internally fragmented and composed of small and disconnected neighbourhoods. Such cities typically lack efficient transport networks, which limits access to job opportunities and reduces the productivity of firms, as they are unable to fully reap the benefits of economies of scale and urban agglomerations (Lall et al., 2017; UNECA, 2017b).

Thirdly, African cities are expensive to investors, particularly regional and international investment, due to high transaction costs associated with inefficient urban form e.g. urban sprawl and underdeveloped transport networks. (Lall et al., 2017). Therefore, steering African urbanization along more sustainable paths is not only a challenge for Africa, but also requires international cooperation to ensure that resource utilization is well managed and that African cities develop sustainable and inclusive economies, societies and environments.

Nowadays, cities account for roughly 70% of global GDP (World Bank, 2009) which affirms the profound role that urbanization plays in unleashing the economic potential of cities. In Africa, primary cities like Johannesburg already account for a considerable share of national GDP. The African Union's Agenda 2063 undisputedly acknowledges that urban centres



In Africa, primary cities like Johannesburg already account for a considerable share of national GDP

substantially contribute to African GDP, generate employment, reduce poverty and can be considered a major driving force in the continent's transformation (African Union, 2015). Similarly, the United Nations has recognized in its Sustainable Development Goal on Urbanization that cities are productivity hubs driving growth and development. (World Bank, 2010).

UN-Habitat's New Urban Agenda (2016), endorsed by the UN General Assembly, stresses the role of cities in economic growth and views cities as vehicles for inclusive and sustainable economic growth. It leverages urbanization for structural transformation, higher productivity, inclusive growth, economic diversification, value-added activities and resource efficiency, while supporting the sustainable transition of informal to formal economies. Yet, significant gaps remain in the availability of data and the empirical understanding of African urban economies. This



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Rapid urbanization in Africa often results in the urbanization of poverty and manifests itself in mushrooming urban informal settlements (slums)

frequently inhibits the formulation of evidence-based policies and opens the door to less efficient or even inappropriate policies. Therefore, the availability of data and suitable methods for measuring the actual contribution of African cities to their economies is vital for future effective development, planning and good urban management.

The current chapter explores several key research questions posited by UN-Habitat regarding the economic geography of FDI into Africa. These

questions concern: (1) the geographic structure of global FDI into African cities and countries; (2) the trends in global FDI in African regions and countries; (3) the forecasts for global FDI in African regions and countries; (4) the competitiveness and economic diversification of African cities within the global FDI network; (5) the factors and impact of FDI in African cities and countries; (6) the derivation of the report's four city case studies (Abidjan, Cairo, Johannesburg and Kigali); (7) the social, environmental and economic factors of FDI clusters in Johannesburg; and (8) the derivation of FDI sectors that can be beneficial to African cities in term of employment generation.

These generic studies form the departure point for the examination of Chinese investment into Africa (Part A), the thematic studies (Part B) and the four city case studies (Part C). Prior to discussing the answers to UN-Habitat's questions, a theoretical

overview is provided here to explain foreign direct investment and its concepts from the field of economic geography that support the various chapters of this report.

1.2. Global economic integration

Globalization continues to shape our world, particularly through trade, financial integration and knowledge dissemination. The flow of capital across national borders, such as portfolio (equity)

and that true globalization gained momentum. Trade liberalization and increased capital mobility - facilitated by the rapid spread of ICT from the 1980s onwards - accelerated economic integration which, in turn, intensified competition for markets, trade, investment, knowledge and skills. This process implies increasingly complex interactions between firms, cities, countries and regions in competitive strategies to attract FDI (Narula and Dunning, 2000) with the common objective of improving economic performance (Begg, 1999; Kresl, 2013).



The Industrial Revolution in Europe in the mid-18th century initiated the modern era of global integration

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investment, debt finance and foreign direct investment is an indication of global financial integration. FDI is considered a key factor in global economic integration (OECD, 2009; Paziienza, 2014). Although economic integration dynamics can be identified in various historic eras, it was the advent of the Industrial Revolution in Europe around 1760 that initiated the modern era of global integration. Initially dominated by colonial economic relationships, it was only after World War II that the integration dynamics broadened and deepened

Today, both national and municipal governments concentrate on policies to enhance their global and regional competitiveness (Kresl, 2013) as an important factor in their pursuit of economic success (Kitson, 2016). Urban economic competitiveness can be defined as 'the ability of an economy to improve market shares in an activity, while providing increasingly better standards of living' (Storper, 1997). This is determined by a variety of factors including the skills of the population (labour capital); accessibility and connectivity (infrastructural capital); the output

capacity of firms (productive capital); institutions and their networks (institutional capital); available knowledge and technology (creative capital); and the attractiveness of a place (cultural capital).

The United Nations (2013) has predicted that 64.1% of developing and 85.9% of advanced economies will have urban population majorities by 2050. Much of the associated urban population growth will be absorbed by secondary and tertiary cities but the world's largest existing urban agglomerations will contribute a major proportion of global GDP (Dobbs et al., 2011).

The United Nations (2013) has predicted that 64.1% of developing and 85.9% of advanced economies will have urban population majorities by 2050

Fundamental to this growth is the rapid accumulation of people, capital and knowledge. This process involves flows between cities at different spatial scales (Jacobs, 1969; Castells, 1996) and has the potential to transform the uneven spatial relations that exist between advanced and developing economies (Harvey, 1982; Friedman, 1986; Shannon, 1989; Arrighi, 1999).

Despite their functional and spatial differences, both global networks and local clusters have the common characteristic that they exist due to their likelihood of interaction. According to Bathelt et al. (2004) these interactions are between “global pipelines” of information, technology and knowledge that are maintained for control, interaction and cooperation within the corporate network, and the “local buzz” of tacit knowledge and information spill-overs. Similarly, *The State of African Cities 2014* highlighted three important aspects for sustainable development in Africa. Firstly, economic development should be to a large degree self-driven through domestic exploration and improvement of technology. Secondly, trade and investment flows within Africa, as well as between Africa and other continents needs to be increased. Thirdly, improved urban governance is conditional for sustainable economic development (UN-Habitat, 2014).

Due to the globalization of firms, corporate activities are spatially dispersed across the world in various types of cities and different urban districts

within these cities. Some firms need to co-locate with similar types of firms while others need proximity to logistical nodes (e.g. airports and railway stations) or require knowledge interactions (e.g. universities and research institutions). Precisely because business functions have different locational needs, distinctive spatial patterns are formed among and within cities. Some functions tend to be geographically dispersed while others are geographically concentrated (Dicken, 2011) to reap the benefits of shared input, information and knowledge spill-overs, and labour market pooling (Marshall, 1920). It is the urban proximity of different types of firms that makes urban agglomerations more innovative and productive (Jacobs, 1969) because the interconnectedness of companies, specialized suppliers, service providers, related industries and associated institutions (e.g. universities and trade associations) facilitates both competition and cooperation (Porter, 2000).

1.3. Key concepts and definitions of FDI

FDI is the investment made by a firm in one country in an enterprise of another country for the purpose of establishing enduring interests and control (UNCTAD, 2007). FDI originates when a multinational enterprise (MNE) decides to relocate some of its activities to a foreign country and thereby gains power to control production, innovation and markets (Athukorala, 2009). The geographical distribution of FDI is determined by the value added activities of MNEs, because the locational advantage of different places influences the location decisions of the firm (Dunning, 1998). In turn, this affects the development of human resources, employment, technological progress and trade.

FDI is considered an important engine for economic growth in recipient countries (Bhandari, 2007) and is said to be more beneficial than other forms of capital such as loans or stock (Loungani and Razin, 2001). Although strictly speaking FDI only concerns capital movements, it also serves as a facilitator of employment, higher productivity, entrepreneurial competition and technology spill-overs. Key potential advantages of FDI for a host country include access to finance, which is especially important in capital-scarce countries, since it provides opportunity for access to production processes, new technology, new management systems and skills transfer to improve local

competitiveness. It also enables the potential for development of local upstream and downstream industries (linkages) and access to new market spaces, including participation in global and regional supply chains. As stated by Faeth (2009), developing economies use FDI to access international markets, as it is an important source of financing - often a better option than local bank loans. Countries further use FDI to address technological and financial constraints (Demirhan and Masca, 2008) and facilitate higher economic growth and development (Asiedu, 2002).

There are several opportunities that firms seek when investing in foreign countries. Firstly, a firm may enter a new economy with the hope of supplying local demand or producing products to sell outside the host country's borders; market seeking and non-market seeking strategies, respectively (Asiedu, 2002). Firms internationalize if the competitive advantages gained from operating abroad are high enough to cover the additional costs and perceived risks. Following Dunning's *OLI paradigm*, Brienen et al. (2010) and Dimitropoulou et al. (2013), argue that firms decide to invest abroad when they have market power, given by the ownership (O) of products or production processes, a location advantage (L) in placing their plant in a foreign country, and an advantage gained from internationalizing (I) their foreign activities in fully owned subsidiaries, rather than carrying them out through international trade or networked relationships with other firms (licensing and franchising).

Finally, FDI is often differentiated in horizontal and vertical types (Barba Navaretti & Venables, 2004; Iammarino & McCann, 2013). Horizontal FDI concerns investments in which a firm replicates its own activities abroad, for instance Toyota completely produces cars in both Japan and the UK. The fundamental trade-off for this type of investment is between the enlarged sales (market access), strategic advantage and reduced transportation costs that are gained by operating abroad, versus the costs of corporate disintegration. Vertical FDI, in contrast, relates to investments in which a firm decides to geographically disperse different corporate functions carrying out some functions abroad. For instance, Toyota buying a separate car distribution centre in the US. In this case, the trade-off is between lower factor costs associated with investing abroad versus the increased costs of trade

and corporate disintegration. Hence, vertical FDI is a more complex form in which various elements of the production process are located where production can be optimized (e.g. lower labour costs) and where urban agglomeration forces and local spill-overs become part of the firm's decision-making process.

Generally, horizontal FDI will locate in cities with good market access, while vertical FDI is a more complex phenomenon where location factors are fundamental to where a particular corporate function will be located e.g. R&D, finance, assembly,

Foreign market-seeking FDI, as the name indicates, concerns firms that seek to supply their goods and services to foreign markets. In most cases, these markets were previously served through exports from the firm's domestic market

sales, etc. These are matters of which we currently know little, except that they are closely linked to geographical scales and spatial economic systems (Iammarino and McCann, 2013). The resultant complex horizontal and vertical networks of firms operating at different scales, plus their interaction with local urban forces, institutional policies and knowledge systems strongly affect the economic development of countries and cities.

Dunning (1998) distinguished four kinds of motives for FDI to locate in particular countries: 1) market seeking, 2) efficiency seeking, 3) resource seeking and 4) strategic asset-seeking. The latter is gaining more importance over the past decades.

Foreign market-seeking FDI, as the name indicates, concerns firms that seek to supply their goods and services to foreign markets. In most cases, these markets were previously served through exports from the firm's domestic market. This kind of FDI is typically a form of horizontal investment whereby (emerging) markets are served by local affiliates. Besides market size, accessibility and infrastructure also play a key role for this type of investment. This is shown in the research by Chenal (2016), which underlines the importance of infrastructure, planning and finance for Africa's growing cities. These concern multinationals

which generally aim to produce and sell their products and services locally and not for export.

Efficiency-seeking FDI refers to firms that attempt to reduce production costs related to labour, machinery and materials. Price differences in these production factors cause firms to geographically separate corporate functions. The lower production costs abroad are commonly associated with lower wages, lower or exemption from taxes, reduced trade costs, as well as grants and subsidies provided by host countries to attract the FDI. This type of investment

rents (which concerns the competitive rent trade-offs between different urban functions). Efficiency-seeking FDI can therefore be described as a process whereby firms decide where a particular fragment in the production process can best be located. Examples are hi-tech and knowledge-intensive multinationals.

Resource-seeking FDI relates to firms that invest abroad to acquire certain resources at lower costs than in their original market. In this case, natural resource availability, good infrastructure (to secure physical supply) and local partners to obtain specific



Toyota's largest manufacturing plant outside Japan is in the US. Horizontal FDI concerns investments in which a firm replicates its own activities abroad

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often concerns vertical FDI. Hence, modern production processes become globally disjointed and are partially relocated to a more effective location. The location of these functions is determined by factors of dispersion and agglomeration, where dispersion relates to e.g. the high costs of local production, fierce local competition, urban congestion, high housing prices etc., while agglomerating forces concern large local markets and access to regional markets, a specialized labour market, local knowledge spillovers and, more commonly, local agglomeration

knowledge are important reasons for these firms to invest abroad. Examples are mining and food multinationals. Although all FDI motives exist in Africa, non-market and resource-seeking strategies have been most frequent due to Africa's strong history of extraction-based FDI. However, as shown further on, this pattern is changing with FDI increasingly targeting the more advanced production and knowledge intensive sectors.

Strategic asset-seeking FDI concerns firms that aim to purchase assets of other firms to bolster long-term



A 2015 study argues that Africa's strength in commodities has resulted in minimal focus on local value addition

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strategic objectives, such as sustaining and advancing the firm's international competitiveness. It concerns multinationals that explicitly aim to acquire unique assets (often entire local firms), so as to bolster their operations internationally and at home. This category of investment is determined by a need to acquire assets and knowledge ranging from specific technological capabilities and management strengths to marketing expertise. This type of investment includes both vertical and horizontal FDI.

In addition, three other classifications of FDI can be distinguished: greenfield investments (development of new locations), brownfield investments (redevelopment of existing sites) and mergers and acquisitions (transfer of ownership of existing facilities). The first two involve capital investments and often new employment and knowledge generation for a location, while the latter generally only concerns ownership change at the location. Greenfield investment is considered to have a more positive effect on development because it implies establishment of entirely new businesses (AfDB, 2016).

1.4. Urban and corporate interconnectedness and hierarchy through FDI networks

Since 1950, an important feature of the global economy has been the growing interconnectedness between different parts of the world as reflected in the rapid growth of FDI. Because FDI now accounts for the lion's share of global GNP, it has arguably become a primary mechanism of the world economy and its evolution (Grimwade, 2000; Dicken, 2011). In 2004, for example, the top-500 multinationals accounted for 90% of global FDI and controlled 50% of world trade (Rugman and Verbeke, 2005). Through FDI, multinationals have become increasingly sophisticated in managing and integrating activities across borders (Narula and Dunning, 2010), securing greater control of foreign markets, production processes and cost advantages. Because FDI brings capital, knowledge and technology to a region, it raises levels of employment, activates the development of local business and leads to the development of new urban projects. It therefore becomes increasingly important for urban regions to understand their relative position within global networks of FDI.

Hymer (1972) foretold that the structure of the world system (network) would eventually mirror the international organization of multinational enterprises,

i.e. the division of labour across geographic regions would resemble the hierarchical division of labour of multinational firms. It was shown that a diffusion of industrialization to developing economies would occur through which production-related activities would concentrate in cities in the middle- and lower-development phases, while corporate decision-making activities would concentrate in a handful of global cities e.g. London, New York, Paris and Tokyo. In line with this, Friedmann's world city hypothesis (1986) posits firstly that the extent to which a city is functionally integrated into the world economy is decisive for its development level. Secondly, core cities are utilized by global capital as hubs in the spatial organization of production and markets. Thirdly, the subsequent economic network enables the arrangement of world cities into complex spatial hierarchies.

Today, in a world where multinationals and FDI increasingly determine the fate of cities through the provision of financing, jobs, knowledge, technology, human capital and infrastructure, a strong coherence exists between cities (place) and their share of FDI

Later, Friedmann (1995) argued that world cities are hierarchically ranked by the economic strength of the city ties they command. Thus, high-ranking cities are the control centres of the global economy, followed at a lower level by cities that control supra-regional economies and, at lower levels, cities that articulate national and subnational economies. Today, in a world where multinationals and FDI increasingly determine the fate of cities (Alderson and Beckfield, 2004) through the provision of financing, jobs, knowledge, technology, human capital and infrastructure, a strong coherence exists between cities (place) and their share of FDI (network) (Wall, 2009; Burger et al., 2013). In other words, the more connected a city, the higher its level of urban development in the sense of economic performance and quality of life (e.g. city product, technical achievement, technological innovation and physical development).

FDI clearly does not randomly locate in just any city or region, but seeks out locations with the right conditions (Kostiainen, 2002; Kitson et al., 2004; Burger et al., 2013). Therefore, knowing which factors attract FDI is critical to achieving competitive cities and regions. At the same time, governments can play an important role by considering which type and scale of investment is appropriate for the city and by choosing desirable spatial forms and infrastructural patterns for sustainable urban and economic development. Hence, governments should adopt cross-sectoral modes of urbanization and industrialization in their national urban development planning (UNECA, 2017b), but also include desirable domestic agriculture policy and population dispersion strategies—especially in countries with high urban primacy (a disproportionate share of the national urban population living in the largest city). For instance, in the *African Economic Outlook 2016*, it has been shown by Wall (2016) that various sizes of cities, through clustering, regional integration, complementarity and collaboration, form economies of scale that attract investors (OECD, 2016). These urban regional clusters attract FDI because they consist of various primary cities and secondary cities in close proximity to one another that are connected by well-established roads, rail and port networks.

1.5. FDI and territorial development

Several location factors affect FDI inflows, e.g. wage rates, skills, trade and financial openness, infrastructural quality, profit margins, natural resources, market size, macroeconomics, political settings and tax incentives (Bayraktar, 2013). The impact of these factors varies across time and the country's stage of development (Dunning, 2009). Other determinants for FDI attraction can be found in neo-institutional theories e.g. the stability of the political system, quality of the legal frameworks and protection of property rights (La Porta et al., 1997; Asiedu, 2002; Kurtishi-Kastrati, 2013). Blonigen (2005) argues that legal protection, corruption and the correlation between poor institutional quality and infrastructural quality also affect FDI attraction.

A number of factors explain why Africa is not a major recipient of FDI. According to an AfDB (2011) report covering the period 1980-2007, market size, trade openness, urban agglomeration

and natural resources all positively influence FDI into Africa. Moreover, stable macroeconomic environments, labour efficiency, local markets, infrastructures, high inflation rates, underdeveloped regulatory legal systems, corruption and political instability are all major positive or negative determinants of FDI inflows (Asiedu, 2006).

Over the past two decades, Africa has become a preferred destination for investment from advanced economies in Europe and North America and increasingly also from emerging economies in East and

Over the past two decades, Africa has become a preferred destination for investment from advanced economies in Europe and North America and increasingly also from emerging economies in East Asia like China and India, as well as countries in the Middle East and North Africa region such as Saudi Arabia and the United Arab Emirates

South Asia like China and India, as well as countries in the Middle East and North Africa region such as Saudi Arabia and the United Arab Emirates. (McMichael & Schneider, 2011). Abundant natural resources and cheap labour, amongst other factors, have helped attract these investments. However, while Africa's FDI inflows are growing in absolute terms, in relative terms they remain stagnant when compared to, for instance, Asia and Latin America. Africa still attracts less than 5% of total global investments (UNCTAD, 2015). This is partly due to the continent's loose global economic integration, which limits both its role in the global network and the full benefits of globalization. This can be attributed to less-developed institutions, relatively unskilled labour, inadequate governance, and low productivity.

Other factors deterring investment in Africa are the low levels of economic integration and intra- and interregional trade in Sub-Saharan Africa. Moreover, African economies generally suffer from a shortage of electrical power, unreliable communication

technology and a huge accumulated infrastructural deficit of an estimated USD900 billion (Kuo, 2015). Further adding to the problem are a pervasive lack of savings, underdeveloped real-estate markets, run-down shipping ports, lack of transport and communication connectivity, excessive pressure on urban management capacity and resources with commensurate shortcomings in housing and municipal service delivery. There is also a serious lack of access to international capital markets. As a result, international firms have been less attracted,

the new century, however, Africa saw a large increase in FDI - from USD20 billion in 2003 to USD50 billion by 2007 (ECA, 2014). Nonetheless, although many developing economies now experience more FDI growth than advanced economies, the African continent accounts for a mere 5% of total global FDI, a third of what Latin America received and an eighth of what flowed into Asia in 2015 (UNCTAD, 2015)

It is often argued that FDI into Africa is mainly motivated by extraction of natural resources, cheap labour pools and large market size (Asiedu, 2006;



New technologies are helping Africans overcome unreliable electricity supplies, which has been one of the factors deterring FDI

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making Africa the least-integrated continent in the world (Ben-Ari, 2014). Moreover, FDI inflows declined by 15% in 2016 due to weak global demand in the wake of the global recession (UNCTAD, 2016). However, over the medium term, global FDI is expected to rise again, based on positive expectations of global macro-economy recovery (UNECA, 2017).

Historically, Africa has lagged far behind other world regions in terms of FDI. Prior to 2000, Africa accounted for around 2% of global FDI inflows (Anyanwu & Erhijakpor, 2004). In the first decade of

Khadaroo & Seetanah, 2009). A study by Chen et al. (2015) posits that what impedes investment in Africa is the continent's strength in commodities, which historically has resulted in minimal focus on local value addition. Onyeiwu and Shrestha (2004) show that inappropriate institutional frameworks have made the distribution of African FDI highly uneven due to the significant uncertainty that weak governance poses to investors. These findings contribute to a perception of Africa as a risky place to conduct business and explain Africa's very low global investment connectivity.



Remittances—monetary transfers by foreign workers to individuals in their home countries—compete with development assistance as one of the largest financial inflows to developing economies

Various studies have identified FDI as a key agent in a country's integration into the global economy and with a positive effect on host countries. However, Žilinské (2010) asserts that FDI can vary in its impact on a country's development including whether it concerns greenfield investment or M&A, the industrial sector, the duration, the business location, and the availability of local firms and suppliers. FDI does not only concern the movement of capital across borders, but also the channelling of wealth, knowledge, and technology, and the creation of employment opportunities to stimulate the local economy. Also, an empirical study by Silajdzica and Mehica (2015) concluded that FDI is essential for knowledge spill-overs, technological advancement, and research and development (R&D) which, in turn, ensure economic progress. Furthermore, macroeconomic

outcomes such as domestic savings, unemployment and foreign exchange rates are also strongly influenced by FDI. It has been shown that major FDI recipient countries tend to have favourable trade outcomes and stronger balance of payment accounts - due to, *inter alia*, declining trade barriers, falling transport costs and the proliferation of multinational companies (Turok, 2004).

Having said that, a commonly recognized negative aspect of FDI is its potential crowding-out of local businesses, particularly in developing economies. FDI may also prevent or reduce domestic investments and can have adverse consequences for national economic progress (Denisia, 2010). Dependency theory asserts that economic dependency on advanced economies is harmful to developing countries in the long run and can result in socio-economic disparities and



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Table 1.
Financial indicators for Africa (% current USD billions) 2011-2016

Investment Type	2011	2012	2013	2014	2015	2016
Tax revenue	36	34	33	33	40	39
Domestic investment	34	35	36	37	43	43
Official reserves assets	17	18	18	17	na	na
FDI	3	4	4	4	5	6
Remittances	4	4	4	4	6	6
Portfolio investments	2	2	2	2	1	1
Development assistance	4	3	4	4	5	5

Source: Based on UNECA (2017), AfDB (2016), IMF (2016), UNCTAD (2016) and World Bank (2016) data

economic fragmentation in the developing economies (Firebaugh and Beck, 1994). Foreign investments are said to also lead to the fragmentation of production and increased inequality between highly skilled and low-skilled workers (Tsai, 1995). FDI possibly also inhibits the development of indigenous skills (Todaro, 1992). Adams (2009), in his study on Africa, concluded that although FDI is crucial to growth it may not be sufficient to properly develop Africa. Nonetheless, despite these negative arguments, most theory supports FDI as a strong development factor. International organizations such as the World Bank, the OECD and the IMF encourage developing economies to attract FDI based on a neo-liberal approach to economic growth theory which holds that FDI contributes to economic growth: a) directly by filling the investment-savings gap and increasing know-how in host countries, and b) indirectly by economic spill-over effects on domestic firms - such as access to foreign technology, skills, people and management best practices (Pazienza, 2014).

1.6. Data and methodology used in this report

Table 1 below is used to put FDI into context with other forms of finance. The first three (tax revenue, domestic investment, and official reserves assets) concern local forms of finance, while the last four refer to international sources. Tax revenue, domestic investment and official reserves assets clearly provide the lion's share of Africa's finance because they concern the internal economic activities of entire countries. It is therefore not surprising that international sources i.e. FDI, remittances, development assistance and portfolio investments are much smaller. Nonetheless, according to the OECD (2016 and 2017), of the four external financial sources, FDI accounts for roughly 32% (Minsat and Nguyen, 2017 - OECD Report 2017: Appendix 1).

Remittances refer to monetary transfers by foreign workers to individuals in their home countries, and this competes with development assistance as one of the largest financial inflows to developing economies. Portfolio investments concern international equity investments where an owner owns less than 10% of a firm's shares. This is in contrast to FDI which permits an investor to exercise far greater control over a company. Of the external private sources, FDI is clearly important to Africa. It is different to other types of external private capital because it is motivated by the long-term prospects of investors seeking to make profits in economic activities that they control

directly. In contrast, portfolio investment and foreign bank lending are influenced by a diversity of factors (e.g. interest rates) rather than by portfolio investors, who are generally motivated by short-term profit considerations that are, in turn, influenced by a diversity of factors (e.g. interest rates).

The FDI data used in this report has been mainly sourced from the *Financial Times'* fDi Markets database and concerns 'greenfield' investments, whereby parent companies start up entirely new ventures in foreign countries by developing new operational facilities from the ground up. The reason for focusing on greenfield FDI (and excluding mergers and acquisitions) in this report, is not only that greenfield project investment is a strong indicator of the attractiveness of a region or city, but also because the data can uniquely be aggregated at sectoral, activity, country and city levels. Furthermore, greenfield projects have high company profile requirements because it normally concerns investments by multinational corporations (MNCs). When MNCs start up new operational branches, they explore domestic markets, which demands domestic capital availability, such as investment networks and cooperation mechanisms. Next, greenfield projects are also known to directly facilitate the growth of capital formation, local productivity and employment. Lastly, in contrast to international financial investments, such as mergers and acquisitions (M&A), greenfield projects tend to transfer core technology and production processes to the host country. For these reasons, but also due to the lack of similarly detailed and comparative data on M&As in Africa, the majority of analyses carried out for this report were done using greenfield FDI.

For the sake of simplicity, analytical results in this report are referred to as FDI, but the reader should bear in mind that it mostly concerns the greenfield component of total FDI. Nonetheless, a correlation was carried out on a sample of M&A (Zephyr, 2017) and fDi Markets greenfield FDI data, where a very high correlation was found. Consequently, it could be assumed that greenfield FDI serves as a good proxy for total FDI.

The *Financial Times'* fDi Markets Data used was verified by testing it against similar databases e.g. those used for UNCTAD reports. The data shows high correlations with their data. The correlation between the number of investments (count) and the value of investment (US dollars) into countries was also tested and it was found that whether using value or count data in aggregated analyses would

Based on the theoretical background of this section, it is evident that much is already known about FDI in Africa. However, a significant share of the existing information is general or dated

not make much difference. Accordingly, depending on the type of analysis, these modes of data were used interchangeably, although the most frequently used was FDI value. The fDi Markets data had to be completed for missing values and cross-matched with other databases e.g. ORBIS, geocoded for geographic coordinates and aggregated to city, country and sectoral level. Besides the fDi Markets data, other sources of FDI data e.g. from the World Bank, UNCTAD and Passport databases, were also utilized for the analyses.

The country or city indicators relevant to FDI attraction were extracted from databases such as those of Oxford Economics, ORBIS, Passport, Analyze Africa and the World Economic Forum's Global Competitiveness reports. Lastly, in the development of this report, various methods and techniques have been used. These include GIS techniques (using ArcGIS and QGIS software) to calculate and map particular types of data; network analysis techniques, e.g. 'space-syntax', 'betweenness', 'closeness' and 'degree centrality metrics' (based on Ucinet, Netdraw and Gephi softwares); as well as cross-sectional and panel data modelling, e.g. fixed-effects, random-effects, VAR panel models, negative binomial models, and ARIMA models for forecasting (using R and STATA statistical packages). In statistical analyses, causal relations were built on theoretical arguments, but could often not be empirically tested due to time constraints and data limitations.

Based on the theoretical background of this section, it is evident that much is already known about FDI in Africa. However, a significant share of the existing information is general or dated. Little detailed empirical understanding exists on global networks of FDI into African cities and countries. For this reason, the remainder of this report aims at contributing to a more detailed knowledge on this topic. Accordingly, the seven research themes mentioned at the beginning of this chapter (the structure, trends, forecasts, competitiveness, determinants and impact of FDI in African countries and cities) are explored below.



Luanda, Angola. Greenfield investment is considered to have a more positive effect on development because it necessitates the establishment of entirely new projects or companies (AfDB, 2016) © Fabian Plock

2. The geographic structure of FDI into Africa



In terms of FDI for headquarters, Johannesburg heads the rankings with its international airport and modern infrastructure being a key factor

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2.1. Results on total FDI networks

In this section the pattern of FDI flows into Africa is described at different levels of spatial and sectoral aggregation: major (world) regions, African constituent regions, countries and cities. Table 2.1 shows the total percentage distribution of FDI (in US dollars) from global regions into Africa and its major constituent regions for the period 2003-2016.

Western Europe, possibly due to its proximity and colonial legacy of embedded trade and financial interests, is the largest continental investor into Africa

(38%), followed by Asia and the Pacific (20%) and North America (15%). It is interesting to note that Africa is the 4th largest investor (into itself) indicating that intra-African investment is significant. Western Europe invests mostly in Northern Africa (47%) partly because this African region is the nearest to Europe, but also because of its strong resource endowment of the petrochemical and tourism sectors. This is followed by FDI into Southern Africa (44%), which most likely reflects the prominence of the English language and historical ties to the UK of such countries as Botswana, South Africa, Zambia and

Zimbabwe. Asia and the Pacific appears to invest quite uniformly across the African continent with almost all values around 20%. North America invests mostly into Central (32%) and Western Africa (18%), arguably due to commodities like oil. Geographic proximity, historical trading and cultural links with the Arab

environment and ease of doing business which makes it a desirable location for investment (Mahdi et al., 2018). It is noteworthy that 40% of the top-10 are in Northern Africa, but also that many of these are currently experiencing negative FDI growth, arguably reflecting political and social tensions in the wake

Table 2.1.
Percentage FDI received by African regions from global regions (2003-2016)

FDI Received by African Regions	Central Africa %	Eastern Africa %	Northern Africa %	Southern Africa %	Western Africa %	Africa %
West Europe	23	27	47	44	28	38
Asia and Pacific	25	22	14	23	22	20
North America	32	14	11	15	18	15
Africa	15	20	4	12	22	13
Middle East	4	14	19	2	8	11
East Europe	1	4	5	1	1	3
Latin America	0	0	1	2	1	1
World Investments into Africa	100	100	100	100	100	100

Source: Wall, 2017. Based on fDi Markets data

world e.g. shared religion and language likely explain why the highest Middle Eastern investments are into Northern Africa (19%), followed by Eastern Africa (14%) and Western Africa (8%). Africa itself invests most into the Western (22%) and Eastern Africa (20%) regions. Strikingly, data for the first decade of the new century indicates Latin America (1%) hardly invests in Africa, discrediting the notion of emerging South-South investment ties between the two continents.

Table 2.2 shows which African cities (out of 558 cities) have received the most FDI (in USD) over the period 2003-2016, as well as their ranking amongst roughly 10,000 cities and towns worldwide. The table also shows the positive or negative FDI growth rates of these cities over the same period.

Firstly, it indicates that Cairo holds the first place in Africa in terms of volume of FDI attracted, followed in 2nd place by Johannesburg, then Tangiers (3rd), Lagos (4th), Casablanca (5th), Algiers (6th), Cape Town (7th), Nairobi (8th), Abidjan (9th) and Dakar (10th). The case study of Cairo in Part C of this report reveals that, apart from the proximity to Europe and Arab States, Cairo is a vibrant city with well-developed infrastructure and road networks, an availability of skilled workers, a conducive foreign investment

The case study of Cairo in Part C of this report reveals that, apart from the proximity to Europe and Arab States, Cairo is a vibrant city with well-developed infrastructure and road networks, an availability of skilled workers, a conducive foreign investment environment and an ease of doing business which makes it a desirable location for investment

of the 'Arab Spring'. It is further noteworthy that many newly emerging urban economies like Abidjan, Accra and Kigali have high positive growth rates. This is common for cities in a 'catching-up phase' coming out of a lower economic base. Part C of this report presents the detailed case studies of Abidjan and Kigali for a deeper understanding of the recent growth and development dynamics of these cities and the role of FDI therein.

Table 2.2.
 The FDI rank of African cities at the African and global scale (2003-2016)

Cities	African Rank	Global Rank	Country	African Region	Total (USD millions)	Growth (%)
Cairo	1	64	Egypt	Northern Africa	13716	-1.25
Johannesburg	2	69	South Africa	Southern Africa	13211	6.23
Tangier	3	82	Morocco	Northern Africa	10542	23.84
Lagos	4	101	Nigeria	Western Africa	9213	7.23
Casablanca	5	111	Morocco	Northern Africa	8370	9.38
Algiers	6	114	Algeria	Northern Africa	8016	-14.74
Cape Town	7	135	South Africa	Southern Africa	6434	0.33
Nairobi	8	146	Kenya	Eastern Africa	5978	25.01
Abidjan	9	155	Ivory Coast	Western Africa	5534	25.44
Dakar	10	180	Senegal	Western Africa	4775	-1.75
Rabat	11	183	Morocco	Northern Africa	4737	-6.54
Marrakech	12	201	Morocco	Northern Africa	4258	-17.20
Accra	13	207	Ghana	Western Africa	4066	34.72
Dar es Salaam	14	244	Tanzania	Eastern Africa	3482	-4.75
Tunis	15	248	Tunisia	Northern Africa	3453	-7.78
Tete	16	250	Mozambique	Southern Africa	3441	-6.23
Luanda	17	277	Angola	Southern Africa	3022	2.06
Maputo	18	287	Mozambique	Southern Africa	2915	13.86
Djibouti	19	290	Djibouti	Eastern Africa	2899	-3.95
Oran	20	293	Algeria	Northern Africa	2845	-5.08
Port Elizabeth	21	295	South Africa	Southern Africa	2827	0.09
Durban	22	303	South Africa	Southern Africa	2701	7.10
Alexandria	23	318	Egypt	Northern Africa	2553	-4.07
Addis Ababa	24	323	Ethiopia	Eastern Africa	2512	12.58
Port Harcourt	25	326	Nigeria	Western Africa	2470	-6.55
Kampala	26	335	Uganda	Eastern Africa	2377	8.38
Kigali	27	349	Rwanda	Eastern Africa	2302	11.21
Abuja	28	353	Nigeria	Western Africa	2294	10.19
Midrand	29	394	South Africa	Southern Africa	2000	-4.93
Khartoum	30	395	Sudan	Eastern Africa	1963	-15.80
Beira	31	403	Mozambique	Southern Africa	1886	-5.20
Pretoria	32	420	South Africa	Southern Africa	1615	11.27
Lusaka	33	425	Zambia	Southern Africa	1572	15.43
Mombasa	34	435	Kenya	Eastern Africa	1386	4.90
Kinshasa	35	440	Congo (DRC)	Central Africa	1363	-2.75
Gaborone	36	450	Botswana	Southern Africa	1139	-0.01
East London	37	453	South Africa	Southern Africa	1084	5.66
Sharm El-Sheikh	38	454	Egypt	Northern Africa	1076	1.01
Port Said	39	457	Egypt	Northern Africa	1022	-7.06
Windhoek	40	460	Namibia	Southern Africa	958	9.11
Harare	41	467	Zimbabwe	Southern Africa	415	-0.63
Walvis Bay	42	468	Namibia	Southern Africa	401	-6.10
Total	558	1325			582,789	

Source: Wall, 2017. Based on fDi Markets data



Shanghai leads the global rankings for inward investment, with Cairo, Africa's leading destination, only ranked 64th globally

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The global ranking reveals that Cairo (64th) and Johannesburg (69th) are doing quite well in the global investment arena. However, no African city is found within the top-10 FDI recipient cities of the world, as visible in the GIS map of the geographic distribution of FDI to thousands of global cities and towns worldwide (Map 2.1).

Map 2.1 illustrates the top-1,000 FDI transactions (grey linkages) between cities (2003-2016). The thicker the line, the more total FDI exchanged between a city pair. If we add up the inward (or outward) linkages of each city, total values can be expressed for that city. Total outward FDI city 'nodes' are coded green and represent investment sources (cities that invest in other cities), while blue nodes (cities that receive investment from other cities), represent total inward FDI. Clearly, cities can both transmit (green) and receive investments (blue).

The map illustrates that the top-1,000 global investments have predominantly taken place between regions in the Global North, particularly between Western Europe, North America and Asia and the Pacific. Most outward FDI is found in these regions, reflecting that these regions are economically powerful in the global context. In this sense, the map illustrates the asymmetric distribution of economic power in the world.

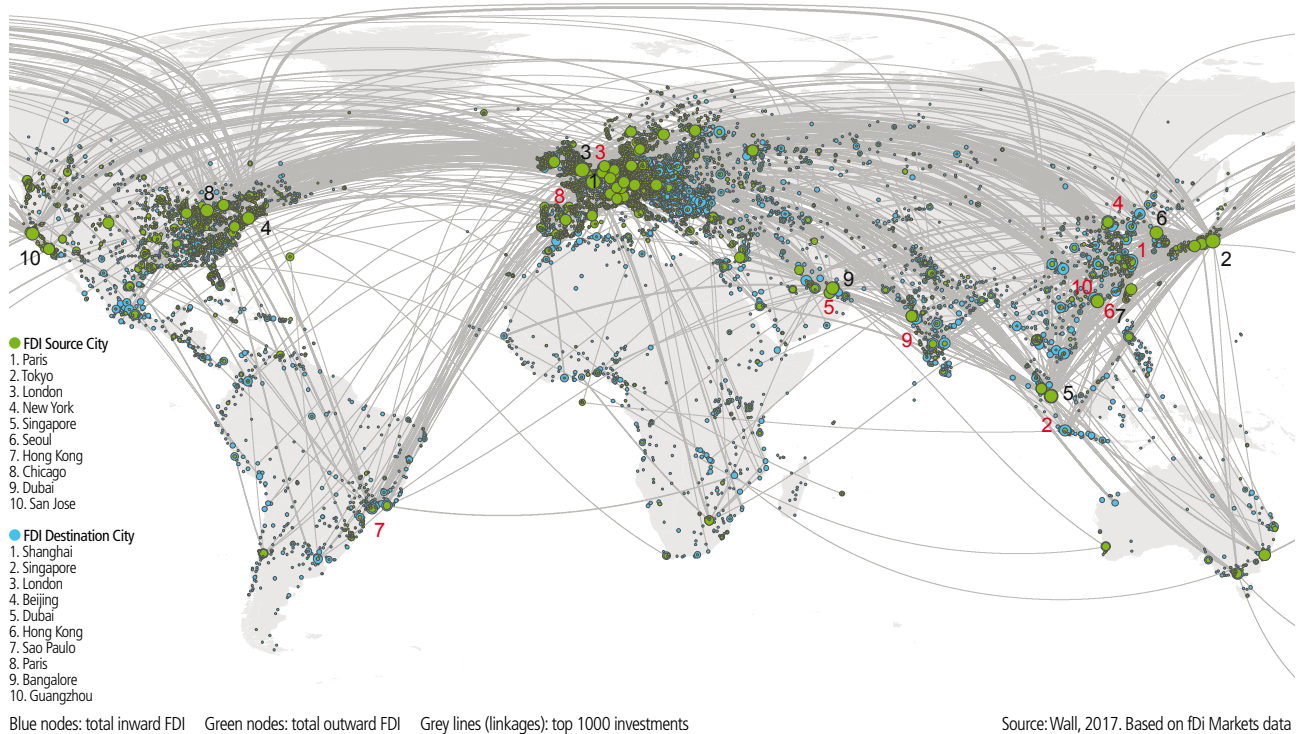
The Global South receives very little high-end FDI and Africa appears particularly disconnected from the key investment axes. Only Cairo and Johannesburg form anchor points in the global economic system, and a more detailed explanation for this is presented in Part C. Africa's low visibility in global investment flows is arguably not because the world intentionally excludes Africa, but is rather the outcome of a complex set of dynamics and conditions which negatively affect investor perceptions of the likely risk-adjusted rate of return on investment. These have already been discussed in the previous theoretical section and will be explored further in this chapter.

Map 2.2 also shows (in the legend) the top-10 global cities in terms of outward FDI (green nodes) and inward FDI (blue). As can be expected, Shanghai is the 1st city destination for global investors, followed by Singapore (2nd), London (3rd), Beijing (4th), Dubai (5th), Hong Kong (6th), São Paulo (7th), Paris (8th), Bangalore (9th) and Guangzhou (10th). Most of these high-ranking cities are in Asia, revealing the recent shift of global investor attention to this part of the world in terms of FDI in manufacturing of goods and related service industries. Among the cities with the power to invest in other global cities and



Paris is the largest investor globally in terms of outward investment by cities and it also heads the rankings for cities investing in Africa

Map 2.1. The top 1000 foreign investments between global cities (2003-2016)





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Among the cities with the power to invest in other global cities and exercise control over their production and markets, we find that the ‘usual suspects’ Paris (1st), Tokyo (2nd), London (3rd) and New York (4th) dominate the investment arena

exercise control over their production and markets, we find that the ‘usual suspects’ Paris (1st), Tokyo (2nd), London (3rd) and New York (4th) dominate the investment arena. New York, which held the top rank for outward investors in the latter half of the 20th century, has dropped three positions in global investment importance. This suggests a shift in global economic significance.

Related to this, we see a rise in importance of four cities: Singapore (5th), Seoul (6th), Hong Kong (7th) and Dubai (9th). Also, the FDI flows map suggests that the US cities of Chicago (8th) and San Jose (10th) (the capital of Silicon Valley) continue to play a significant role in the world economy. The

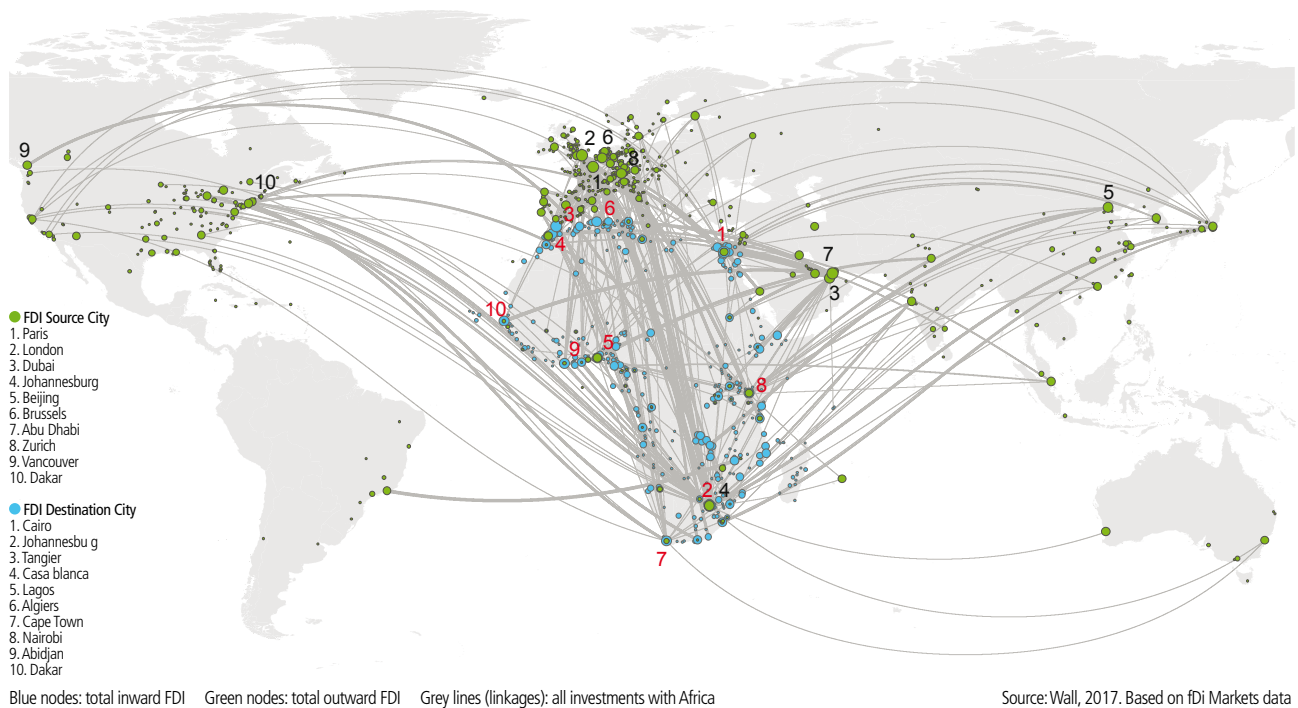
blue dots in Africa indicate that many African cities do receive global investments, albeit that these are in comparative terms small.

The GIS map (Map 2.2) depicts most of the FDI links from world cities (green nodes) into African cities (blue nodes). The map also reflects FDI flows from African cities (green nodes) into other African cities. From this map it is clear that the prime investment source region for Africa is Western Europe, followed by North America, and the Asia-Pacific region. Again, despite popular discourse on emergent South-South collaboration, there is little evidence of South-South investment flows into Africa, apart from one strong linkage from São Paulo. However, the data suggests that if the weakest FDI linkages are also shown, then more South-South ties would be visible. Even so, this is not indicative of strong economic exchange between these regions.

The FDI sources (green nodes) show which cities are the largest overall investors into Africa: Paris (1st), London (2nd), Dubai (3rd), Johannesburg (4th), Beijing (5th), Brussels (6th), Abu Dhabi (7th), Zurich (8th), Vancouver (9th) and Dakar (10th). Interesting is the fact that two of the top-ten source cities are in Africa, while four are in Europe. Again, we see reflected in the map the ranking of the top African FDI destinations (blue nodes) as evident in Table 2.2. It is also clear from the map that Johannesburg appears highly connected to the world economic system, while Cairo and other Northern African cities strongly connect with cities in the Middle East. This data was explored further by means of Gephi ‘network analysis’ software, as depicted in Map 2.3.

In this ‘network graph’, the distribution of FDI according to the network centrality metric ‘betweenness’ is shown. This is a complex mathematical measure of the strategic position of African cities within the global FDI system. The map is not based on spatial coordinates as in the case of GIS mapping but represents the mathematical distribution of investment data. The blue nodes denote the strategic strengths of African cities within the system, with Johannesburg (1st), Nairobi (2nd), Lagos (3rd), Cairo (4th), Lomé (5th), Dar es Salaam (6th) and Port Louis (7th). The measure indicates that most FDI in Africa passes directly or indirectly through these cities. In other words, these cities are the investment gateways into African economies. Impacts on the investment gateway function of any of these cities would have repercussions for the entire African FDI system.

Map 2.2. All FDI from global cities into African cities (2003-2016)



The red nodes represent investment source counties for African cities. The analysis suggests that these cities are grouped into three major functional regions. The first can be considered to be an Arabic/Northern African constituency (left), while the middle region generally represents a Sub-Saharan Anglophone super-cluster. Lastly, the third region is a rather odd cluster of mostly commodity port cities like Port Sudan, Richards Bay, Mossel Bay and Delta State.

If we just look at FDI only between African cities (Map 2.4), we see that the top-ten investors in Africa are: Johannesburg (1st), Casablanca (2nd), Lagos (3rd), Nairobi (4th), Cairo (5th), Port Louis (6th), Dar es Salaam (7th), Harare (8th), Lomé (9th) and Cape Town (10th). In turn, the top-10 receivers of African FDI are Cairo (1st), Johannesburg (2nd), Tangier (3rd), Casablanca (4th), Lagos (5th), Algiers (6th), Cape Town (7th), Nairobi (8th), Abidjan (9th) and Dakar (10th).

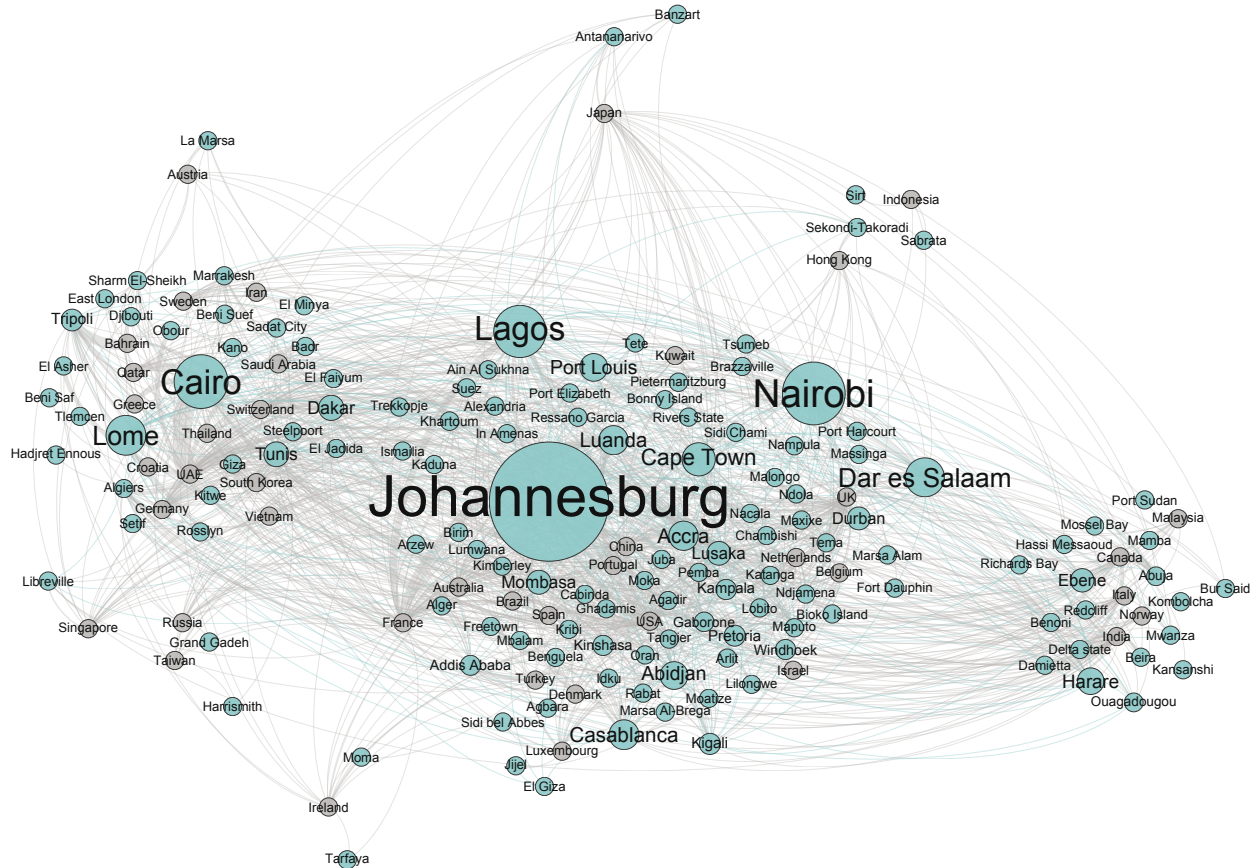
Next, also included in this map are countries colour coded by the market-strength of home-grown African multinationals. These are firms like South Africa’s BHP Billiton, SAB-Miller, Naspers, or Morocco’s Attijariwafa Bank, Morocco Telecom and Banque Marocaine du Commerce amongst others. The countries with the strongest presence of African MNCs are South Africa (1st), Morocco (2nd),

Egypt (3rd), Nigeria (4th), Kenya (5th), Tanzania (6th), Ghana (7th), Namibia (8th), Tunisia (9th), and Botswana (10th).

2.2. Results on FDI agglomerations in Africa

The next section looks at “heat-maps” of FDI in Africa, for total FDI, as well as the investment sectors of headquarters, hi-tech, manufacturing, services, and resources (Map 2.5). The maps are based on GIS interpolation techniques which predict the ‘hottest’ or most attractive (dark-red) to ‘coolest’ or less attractive (light-yellow) regions for FDI. In the first map (top-left) the core FDI agglomerations for total FDI are seen. The predominance of Northern African cities is evident, particularly the Nile River corridor (Cairo) and Atlas Mountains corridor. In Western Africa, the strong Gulf of Guinea regional corridor is evident. In the south of the continent, the Gauteng Province and associated corridors (the Johannesburg-Maputo-Durban FDI triangle) is prominent. A 5th emergent agglomeration is the Victoria Lake corridor, which includes the cities Kigali, Kampala, Nairobi, Mombasa and Dar es Salaam. Although this is a smaller region, it has the highest FDI growth rates of all. Besides these

Map 2.3. Network analysis map of the strategic positions of African cities within the global FDI system (2003-2016)



Turquoise nodes: the most strategically positioned African cities within global FDI networks
 Grey nodes: sources of FDI (countries)

Source: Salimgareeva and Wall, 2017. Based on fDi Markets data

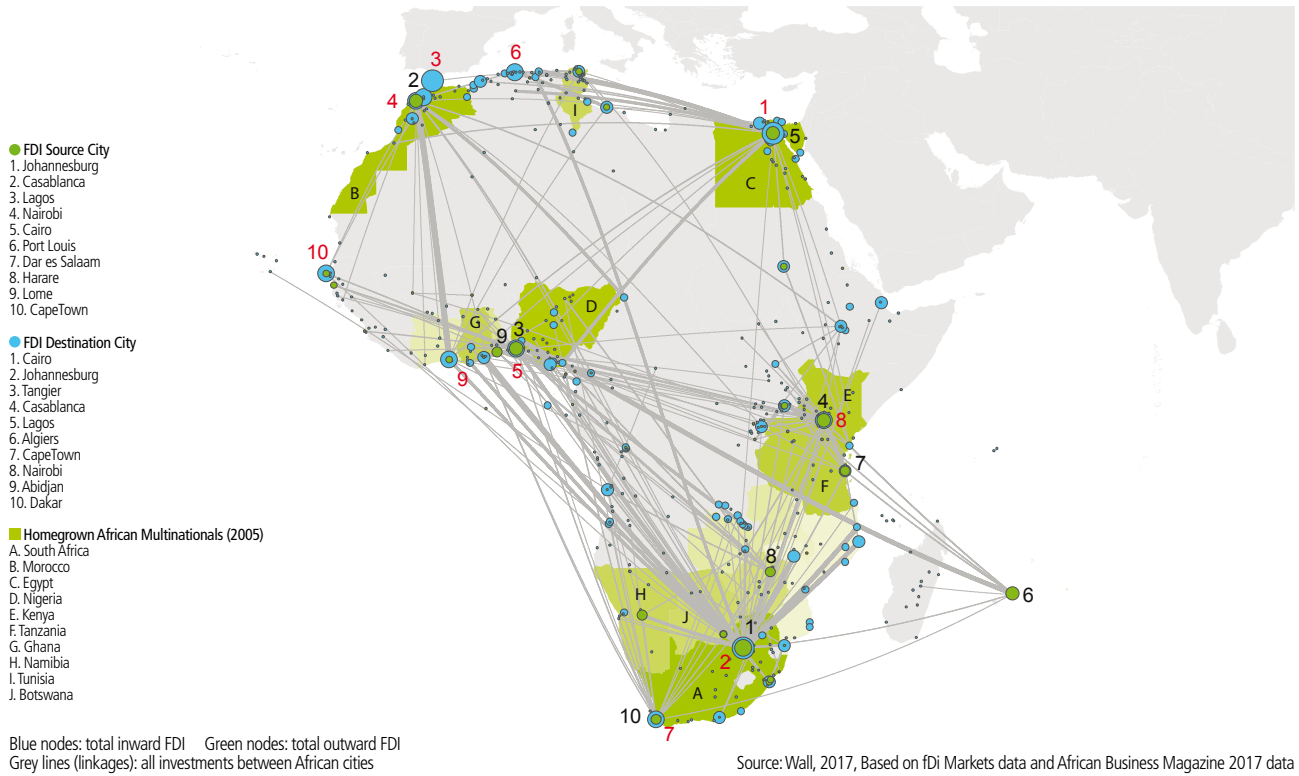
major FDI areas, there are several emerging FDI agglomerations like the Zimbabwe-Mozambique corridor and the Ethiopian cluster. Most investment agglomerations are close to oceans, river-deltas or lakes and it is clear that the inner core (particularly landlocked countries) receives very little investment.

The next map (top-middle) shows investments only into the establishment of foreign headquarters. Johannesburg stands out as the headquarters FDI capital of Africa, followed by Nairobi, Lagos and Cairo. The latter are also the cities with major financial centres, important business activity and international stock exchanges. Besides its historic connections with Europe, Johannesburg is characterized by modern infrastructure and a relatively conducive environment for both domestic and international firms that make the city attractive for foreign investment. (This is further explained in the Johannesburg case study in Part C of this report.)

Business and industrial clusters are catalysts for industrial growth in Africa because they help firms overcome growth constraints and also enable governments to address multiple constraints holistically

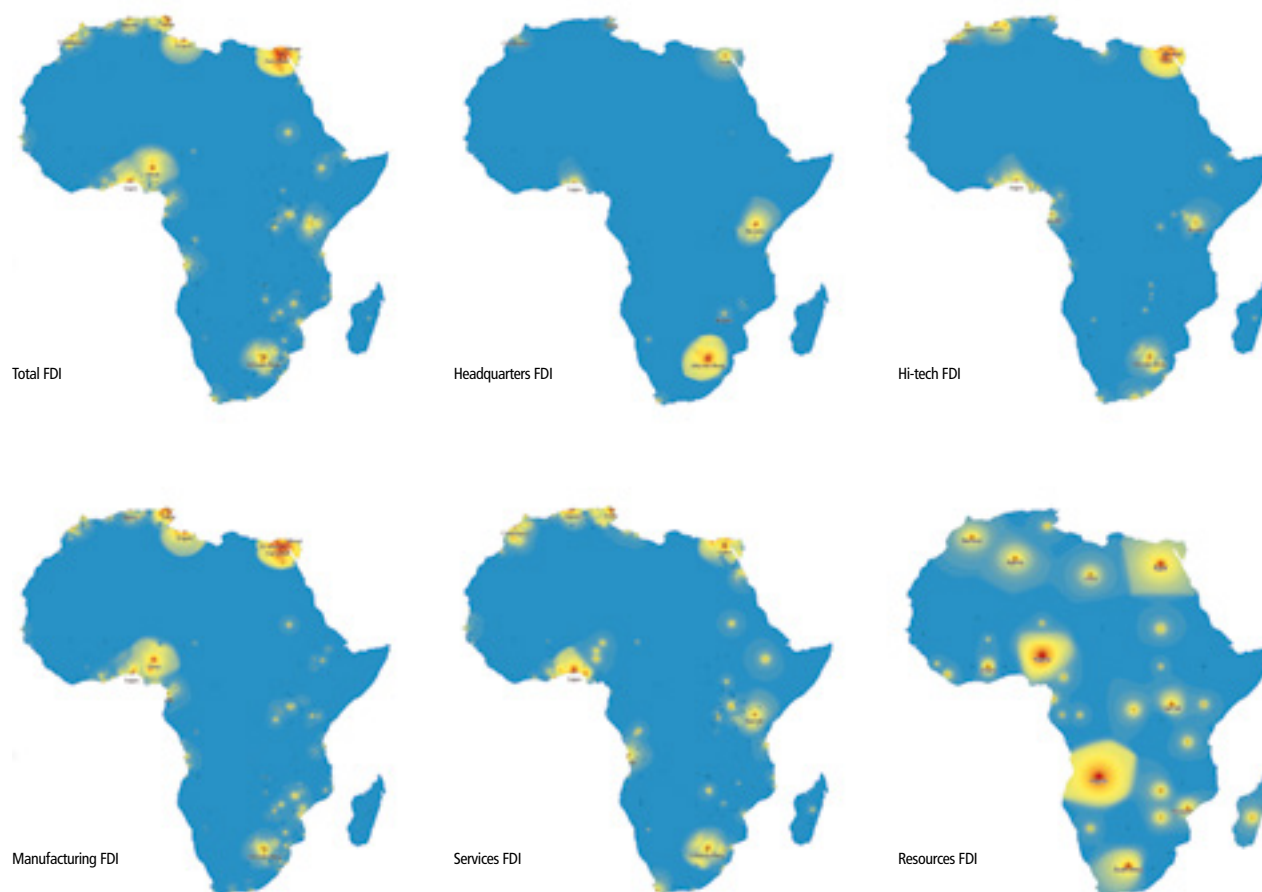
Business and industrial clusters are catalysts for industrial growth in Africa because they help firms overcome growth constraints and also enable governments to address multiple constraints holistically. Clusters promote knowledge sharing between firms, common infrastructure and services, pools of labour and raw materials as well as providing a larger market (African Development Bank Group, 2017).

Map 2.4. FDI between African cities (2003-2016)



An oil refinery in the Port of Lagos. Africa's major oil rich countries such as Nigeria take the lead in resources FDI

© Igor Groshev

Map 2.5. Heat-maps of FDI in African cities - for total FDI and various sub-groups (2003-2016)

Models generated through GIS interpolation methods.
 Red: most attractive Orange: attractive Yellow: less attractive Blue: not attractive

Source: Levering and Wall, 2017. Based on fDi Markets data

The third map of Map 2.5 (top-right) illustrates hi-tech FDI in Africa. As is the case with headquarters FDI, these investments are concentrated in a limited number of locations i.e. the major manufacturing and innovation hubs of Africa. The Nile River corridor (Cairo) and the Gauteng Province corridor (Johannesburg) are particularly strong in attracting hi-tech investments. Cairo and Johannesburg are clearly Africa's most competitive cities for innovative industries due to their more developed human capital, larger market size and strong financial markets. All these factors are identified as determinants of knowledge FDI (see the relevant chapter of Part B in the online version of this report (Wall et al., 2018)).

These findings correlate strongly with the fourth map focusing on manufacturing FDI (bottom-left) and with the services FDI map (bottom-middle).

Cairo and Johannesburg are clearly Africa's most competitive cities for innovative industries due to their more developed human capital, larger market size and strong financial markets

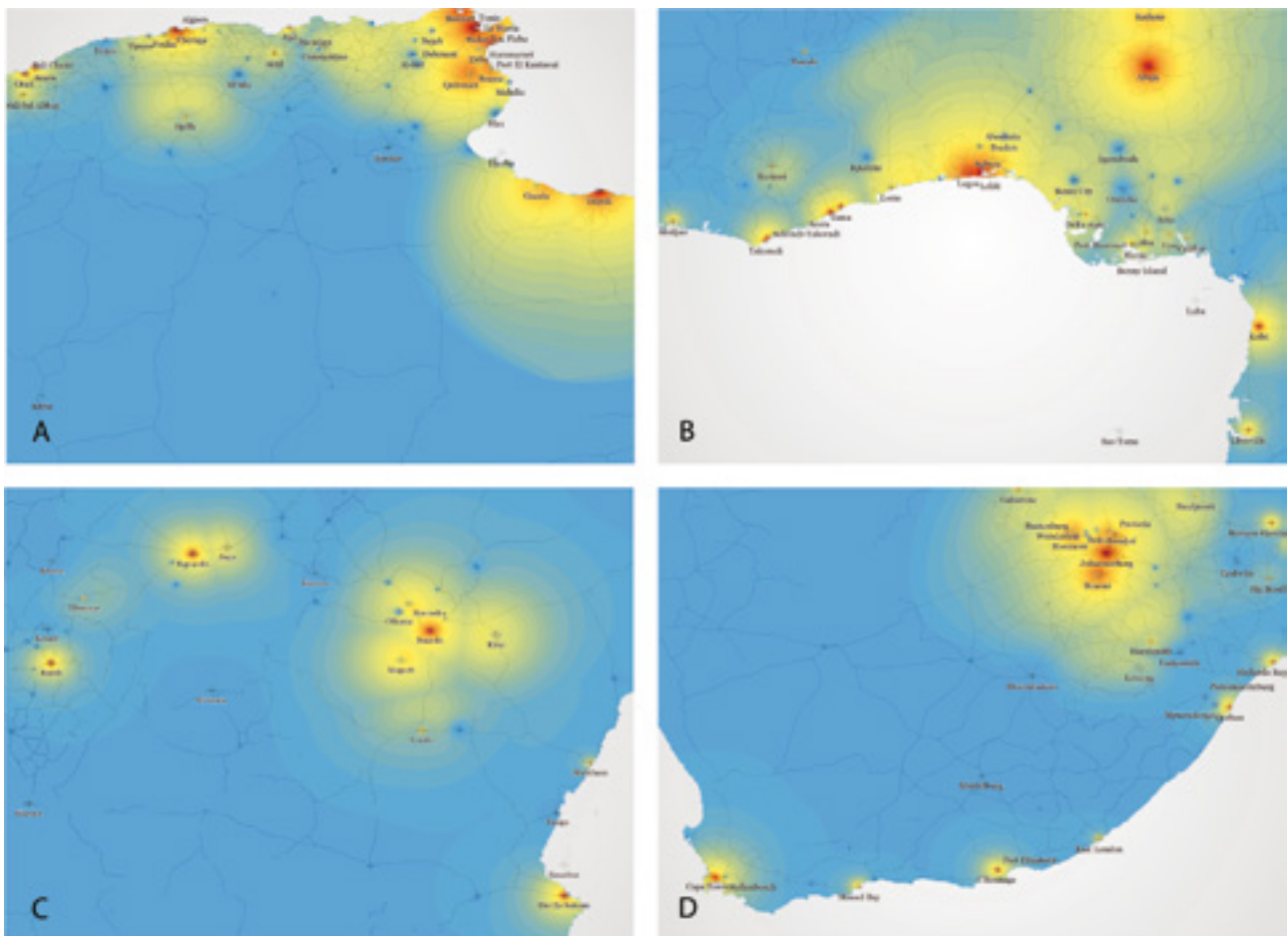
This confirms that business and financial services generally co-locate with manufacturing activities to provide capital and advanced producer services. It should be clear that investments in services are the most widespread of all FDI types in Africa, possibly reflecting provision of a diversified range of services to firms and public entities in many African cities.

The final map (bottom-right) concerns resources FDI, investments that target specific commodity production (e.g. oil, minerals, metals and agricultural commodities). The associated production facilities are generally located in rural areas rather than cities and this map therefore had to be generated at the country level. The geographic midpoint of each country was used to map the strength in investment in resources. For obvious reasons, Africa's major oil-rich countries take the lead in resources FDI: Angola (1st), Nigeria (2nd), Egypt (3rd) followed by mineral-rich South Africa (4th). Most African countries have some strength in resources investment, reflecting the world's interest in African commodities.

In the next section, based on the total FDI map (Map 2.5), we narrow the focus on four major African

FDI corridors (Map 2.6). The first one is the Atlas Mountain corridor (top-left) with prominent FDI cities like Algiers, Casablanca, Tangier and Tunis. Their proximity to Europe and strong relationship with Middle Eastern cities arguably explains this. The second is the Gulf of Guinea investment corridor (top-right) with key hub cities Abidjan, Abuja, Accra and Lagos, among several others. The third is the Victoria Lake corridor (bottom-left) including key cities like Dar es Salaam, Kampala, Kigali, Mombasa and Nairobi. Lastly, the Gauteng Province corridor (bottom-right) which extends from the primary agglomeration of Johannesburg to the port-cities of Durban, Maputo and Richards Bay. The map also indicates that Cape Town's economy is actually quite independent of the Gauteng conurbation.

Map 2.6. Heat-maps of four major African FDI corridors (2003 - 2016)



A: The Atlas Mountains corridor B: The Gulf of Guinea corridor C: The Victoria Lake corridor D: The Gauteng corridor
Source: Levering and Wall, 2017. Based on FDI Markets data

Next, we focus on FDI in the key cities of these four major African FDI corridors. The postal code address of each investment was mapped in GIS (Map 2.7) to reveal FDI clusters in individual districts of the four case study cities Abidjan, Cairo, Kigali and Johannesburg. This forms an interesting bridge between exogenous (originating from outside) FDI network information (e.g. Maps 2.1 to 2.4) and endogenous (originating from within) investment information at the urban level. This is important since it will be at this global-local nexus that the future of urban planning might lie, tying multi-scalar economic and urban data and information together. This is partially explored in the last section of this chapter, in which the urban determinants of FDI in Johannesburg's districts are econometrically investigated. In each of the four case study cities Abidjan, Cairo, Kigali and

Johannesburg, researchers have qualitatively and quantitatively deepened the understanding of the motives of investors and the actual determinants of FDI (see Part C of this report).

In the first map (top-left) we see FDI clusters in Cairo's districts, while the map at the top-right shows investment in Abidjan. The next map depicts Kigali (bottom-left) and FDI clusters in Johannesburg (bottom-right). It is clear from the maps that FDI concentrates in particular parts of the city and that there are clear patterns of investment. The detailed map on Johannesburg's investment (Map 2.7) shows this even more clearly. Quite obviously the unequal spatial distribution of FDI patterns are not random but driven by deliberate considerations. It would therefore be interesting for future research to explore factors and urban characteristics that cause this unequal spatial distribution.

Map 2.7. Heat-maps of FDI clusters inside the case study cities (2003-2016)



A: Cairo clusters (North Africa) B: Abidjan clusters (West Africa) C: Kigali clusters (East Africa) D: Johannesburg clusters (Southern Africa)
Source: Gorjux and Wall, 2017. Based on FDI Markets data

3. Trends in global FDI in African regions and countries



Northern Africa is the only region that experienced negative growth for FDI from 2003-2016 most probably due to political upheaval from the Arab Spring and oil market trends

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3.1. The trend of global and African FDI

In the previous section, the structure of FDI into Africa has been explored. This section examines the temporal dimension. That is, the historic trends in investments over the period 2003-2016. The objective is to better understand the characteristics of growth and decline in African FDI over time. This is done on a comparative basis with reference to global and continental FDI growth, as well as at various levels of aggregation within Africa i.e. the five African sub-regions, the countries, cities,

investment classes, sectors and activities. Lastly, findings of a study exposing the spatial reach of investment ties into Africa (FDI distance in kilometres) is examined to see whether international FDI into Africa, is becoming more regionally sourced or more global in origin. In other words, is the intra-African FDI network expanding or contracting?

Worldwide (see Online Appendix 1.1) global FDI into all parts of the world rose between 2003 and 2009, after which it declined until 2014. This was due to the 2008/9 global financial crisis and its aftermath. Subsequently,

global FDI started to rise again, as tentatively posited in studies such as the *World Economic Situation and Prospects* (WESP) report (United Nations, 2017).

Figure 3.1 shows that FDI into Africa followed the global trend, reinforcing the point that African economic prospects are impacted by developments in the global arena and that in an interconnected global economic system, shocks and fluctuations in economic activity are transmitted rapidly between countries.

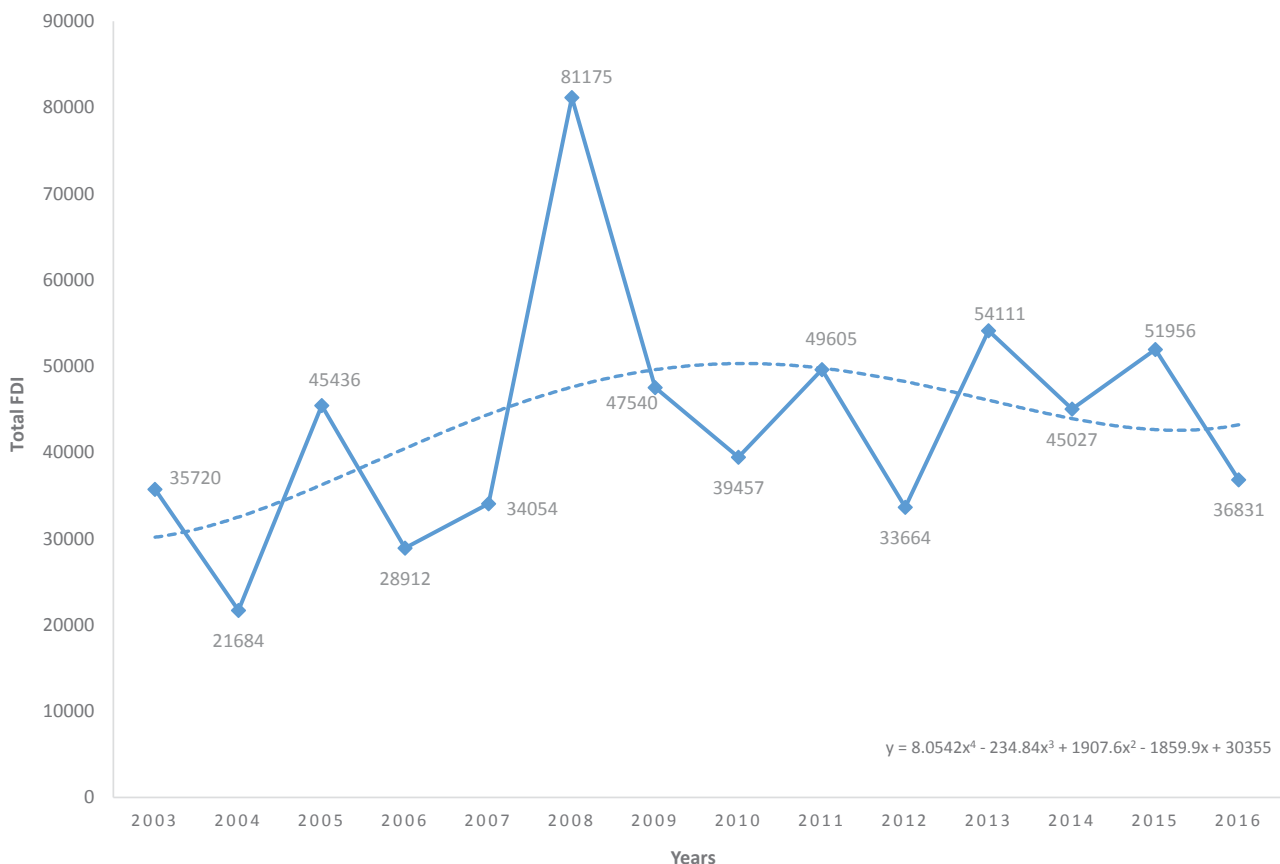
This becomes even more evident in the next chart (Online Appendix 1.1). Here we see that world FDI has had a moderately positive growth during this period. Africa is the continental region with the second highest positive growth rate (exponential growth), second only to FDI into North America. Nonetheless, its investment scale (size of blue dot), is the second smallest in the world. This is the opposite of FDI into Asia and Pacific, which is the largest in scale, but had

the lowest positive growth rate. Complementing these findings, the growth of FDI into all world regions is seen in Online Appendix 1.2.

3.2. The trend of global and African FDI

FDI dynamics in Africa’s five regions (see Online Appendix 1.3) reveal that Northern Africa, although receiving the highest volume of FDI over the 2003-2016 period, is the only African region experiencing negative investment growth (-1%). This is probably due to the political and social upheavals in the region e.g. the Arab Spring, as well as global and oil market trends. At the other extreme, Eastern Africa, despite having the second lowest volume of FDI, has the highest growth rate (7.5%). This is most likely related to its low investment base and strong Asian and Middle Eastern investments. Strong FDI growth also occurred

Figure 3.1. The trend of FDI into Africa (2003-2016)



Blue dots: FDI over time (Dollars) Blue dotted line: the trend over time
Source: Wall, 2017. Based on fDi Markets data

in Western Africa (6.9%), driven by US investment - particularly in the extractive industries. The Southern African region is in third place, combining fairly strong FDI growth (5.1%) with the continent's second highest regional volume of investment. However, this is mostly the outcome of investments in South Africa. The Central African region has both the lowest positive FDI growth and smallest volume. If we consider country level FDI aggregation (Figure 3.2) it is clear that most countries with negative FDI growth rates (a decline in FDI flows) are in the Western and Northern African regions.

Countries with the highest positive growth rates are Ethiopia (1st), Côte d'Ivoire (2nd), Kenya (3rd), Mozambique (4th) and Rwanda (5th). However, these countries all have low volumes of investment. The continent's two strongest countries in terms of both FDI volume and growth rate are South Africa (1st)

and Egypt (2nd) followed at a distance by Morocco (3rd), Nigeria (4th) and Mozambique (5th). Egypt has the highest volume of investment but a moderately negative growth rate. The trend line in the graph reveals a positive relationship between FDI growth and volume over the 2003-2016 period.

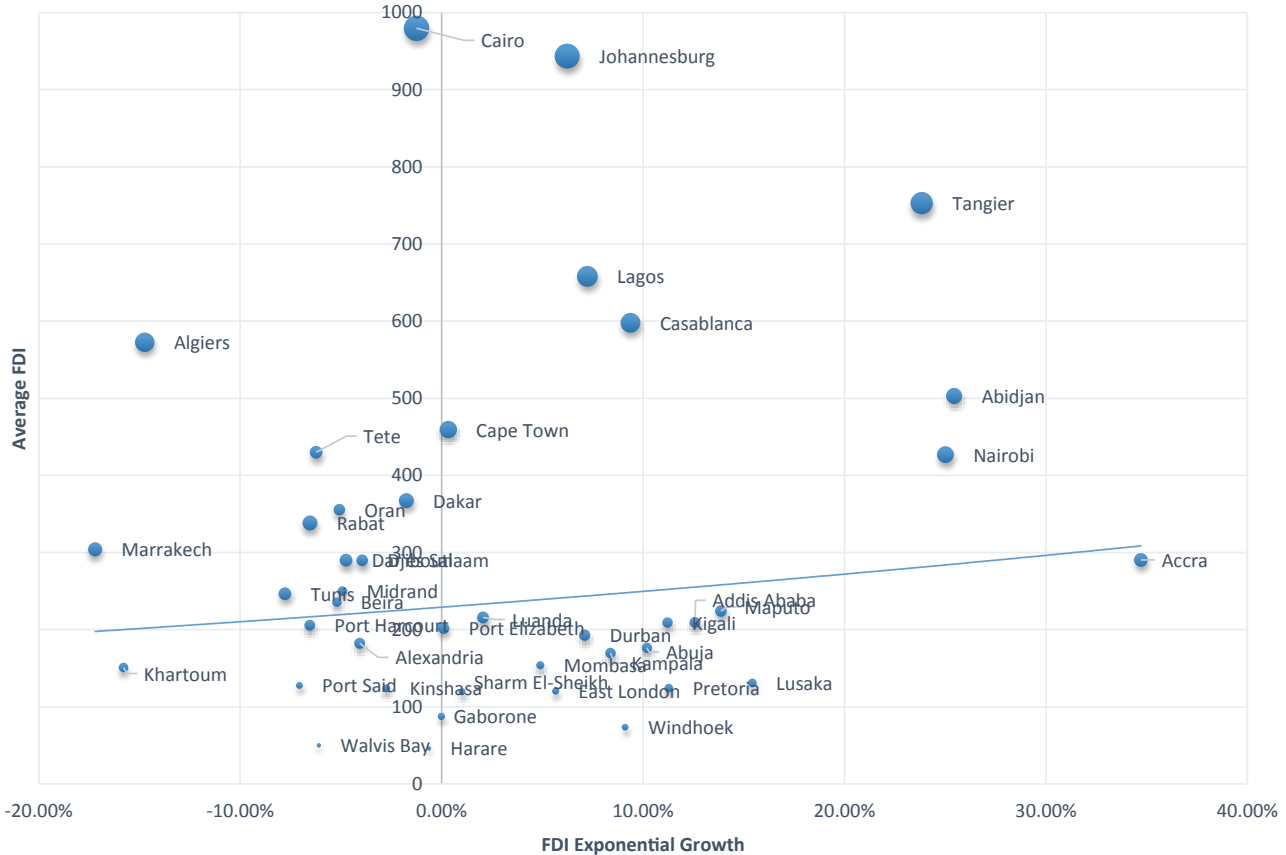
The lower urban aggregation level (see Figure 3.3) reveals that the highest FDI growth for cities is found in Accra (1st), Abidjan (2nd), Nairobi (3rd) and Tangier (4th). FDI flows declined most rapidly in Algiers, Khartoum and Marrakesh. In this context, it becomes clear that Johannesburg has the most balanced investment profile in Africa in terms of growth and volume, followed at a distance by Lagos, Casablanca, Tangiers and Cape Town. Here again we see the same growth slope as the previous chart indicating that, in general, FDI into African cities was positive over the 2003-2016 period.

Figure 3.2. The growth of FDI in African countries versus the average FDI (2003-2016)



Blue dots: average FDI (Dollars) X-axis: positive and negative FDI growth. Source: Wall, 2017. Based on fDi Markets data

Figure 3.3. The growth of FDI in African cities versus their average FDI (2003-2016)



Blue dots: average FDI (Dollars) X-axis: positive and negative FDI growth.
Source: Wall, 2017. Based on fDi Markets data

3.3. African FDI trends by industries, sectors and activities

Trends of FDI industries

Using the same data on FDI into Africa we now focus on FDI flows into industries, sectors and activities. In the next chart (Online Appendix 1.4) we review African FDI according to four broad industrial aggregation categories: high-tech, manufacturing, services and resources FDI. These have been measured in terms of value of investments (USD) rather than the number of investments (count).

Most FDI into Africa has been in manufacturing. This the most anchored and stable FDI sector with substantial scale, albeit with moderate investment growth (5%). Resources FDI, although at a significant scale, has shown strong negative growth (-17%) over the 2003-2016 period. This correlates with the global

It should be noted that Africa is no longer simply a FDI destination for natural resource extraction but that a much wider spectrum of FDI is now being attracted into, amongst others, knowledge-intensive production and services

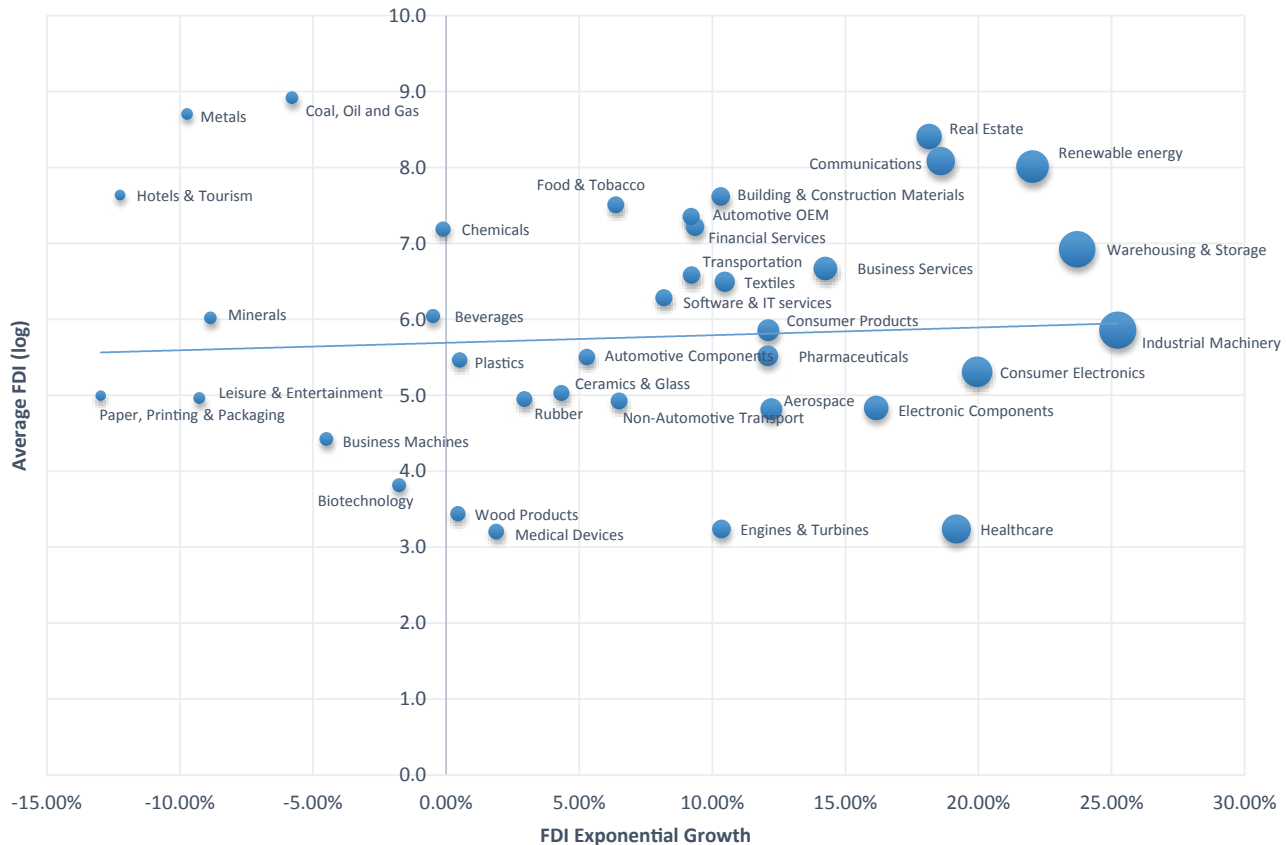
commodities cycle over the past decade, caused by rising global production capacity and slowing growth in demand that resulted in declining commodity prices worldwide. However, it should be noted that Africa is no longer simply an FDI destination for natural resource extraction but that a much wider spectrum of FDI is



FDI into the hi-tech sector had by far the biggest growth in Africa from 2003 to 2016

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Figure 3.4. The growth of sectoral FDI into Africa versus the average FDI of the sectors (2003-2016)



Blue dots: average sectoral FDI (USD) X-axis = positive/negative sectoral FDI growth
Source: Wall, 2017. Based on fDi Markets data

now being attracted into, amongst others, knowledge-intensive production and services. The *African Economic Outlook* report (2017) states that FDI inflows into Africa during 2016 indicate investment diversification into services, manufacturing and infrastructure-related projects (African Development Bank Group, 2017).

FDI into the African hi-tech sector had by far the strongest rate of growth during the period observed. Nonetheless, it is also the sector with the smallest volume of investment and as shown in the continental GIS heat-map (Map 2.5), the least widespread investment sector in Africa concentrated primarily in key hi-tech cities like Cairo, Johannesburg, Lagos and Nairobi.

Trends of FDI sectors

In Figure 3.4 the FDI data is shown disaggregated into diverse industrial sectors. The highest industrial sector FDI rates of growth are in industrial machinery (suggesting rising productivity),

FDI into commodity sectors like coal, oil, gas, minerals and metals has been in decline. This can change, however, if and when commodity supply and demand come into better balance and the global commodity price cycle turns

warehousing and storage (reflecting growing trade activity), renewable energy (a positive development in the light of climate change) and consumer electronics, healthcare, communications and real estate (indicative of growing middle classes and rising consumer purchasing power).

FDI into commodity sectors like coal, oil, gas, minerals and metals has been in decline. This can

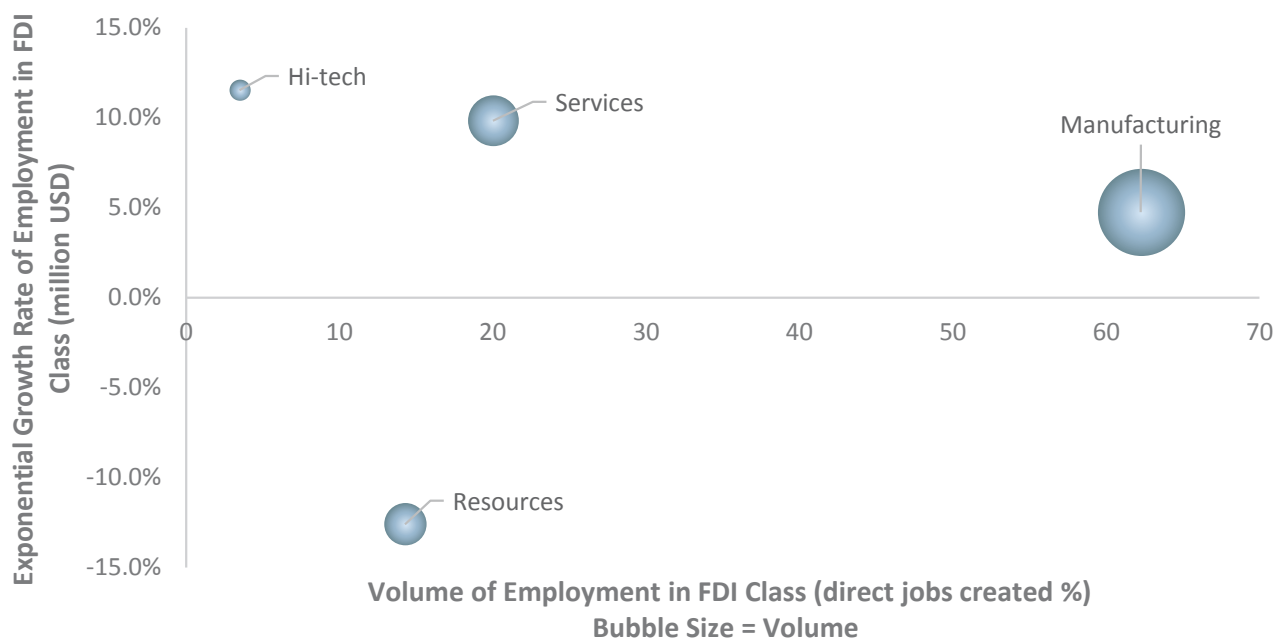
change, however, if and when commodity supply and demand come into better balance and the global commodity price cycle turns. Regardless, it is clear that African FDI is shifting from the primary to the secondary and tertiary sectors. That is a good development, even though it is still an open question how much of this more diversified FDI spills over into local economies

Whereas the data on investment in extraction units (commodities) show a declining FDI trend, they still receive the second largest volume of investment. This finding is in line with recent OECD research showing that non-resource-rich countries are becoming increasingly attractive destinations for FDI (see also Appendix 1). This is further confirmed by the *African Economic Outlook* report (2017), which also states that FDI is increasingly flowing towards non-resource-rich countries and sectors. In 2015, the five fastest growing African economies were all non-resource rich, with Ethiopia, Côte d'Ivoire and Rwanda leading.

Ethiopia, as part of its 2025 Vision Ethiopia, has focused on the development of industrial parks and promoting manufacturing (textiles, leather, agro-

processing and pharmaceuticals) to become a light manufacturing hub (African Development Bank Group, 2017). The highest volume of FDI activity is in manufacturing (production facilities) which has had moderate growth. (This will be elaborated on further in Part B in the chapter concerning FDI's impact on employment.) This type of FDI activity is most beneficial for economies in Africa, followed by investments in construction, and is consistent with productivity improvements in the economy and the development of urban areas through investment in the very housing, utilities supply and network infrastructures a developing economy needs.

Figure 3.5. African FDI classes—direct employment by growth and volume (2003-2016)



Blue dots: volume of employment X axis: growth of employment
Source: Wall, 2017. Based on fDI Markets data

Trends of FDI activities

Next, we examine the character of FDI into Africa in terms of activities (see also Online Appendix 1.5). This differentiates investments according to their activities (which is not the same as sectors) i.e. headquarters, sales and marketing offices; construction activities; ICT infrastructure; extraction plants; retail units or logistics hubs.

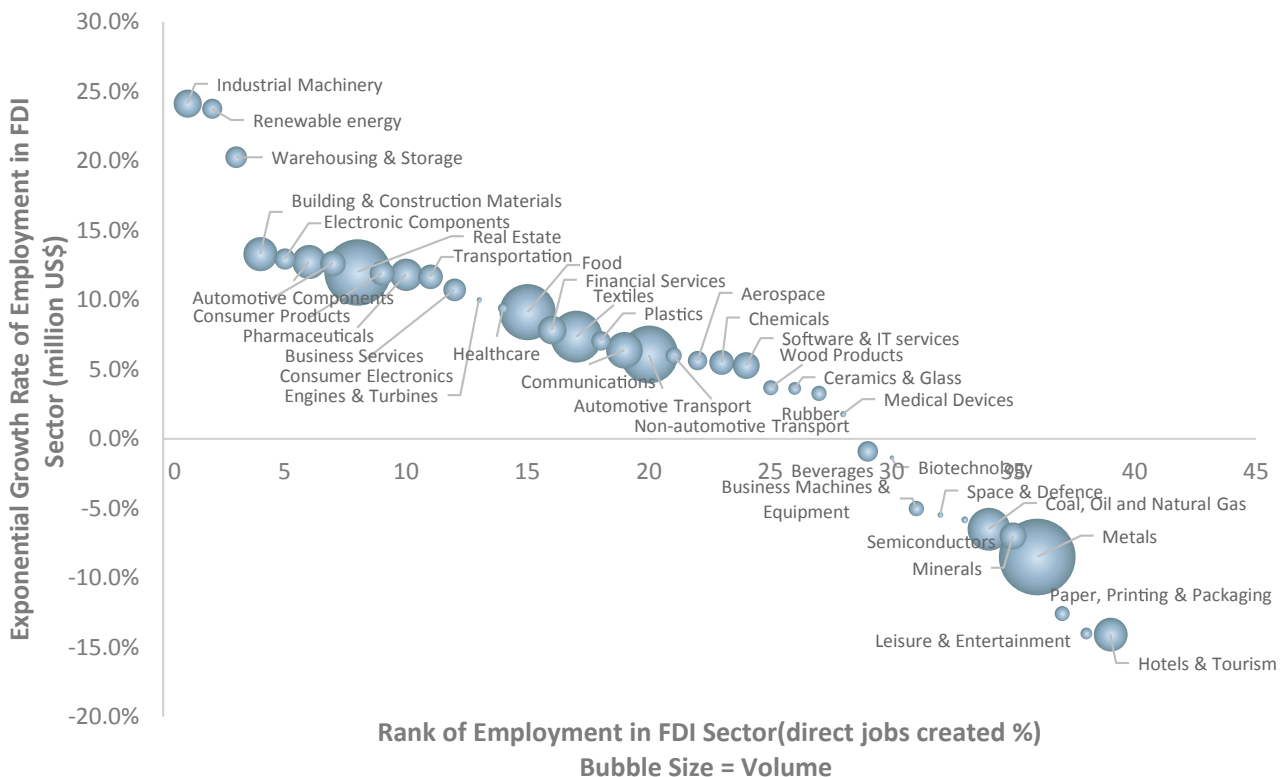
Successful outcomes for Africa’s future economic development under rapidly progressing urbanization depend firstly on an adequate supply of energy. FDI into ICT development has the second highest rate of growth and also has high investment volumes indicating that the development of advanced ICT networks in Africa is now a priority area. Logistics, distribution and transportation is the third highest FDI growth sector, indicating that African trade interconnectedness within countries and regions, but also offshore is improving. Business services, sales and marketing, and retail activities also have high FDI growth rates in response to the opportunities arising from growing populations,

accelerating urbanization and the associated growing urban middle classes with increasing household purchasing power. More retail outlets are required as sales and marketing activities of consumer products increase, while more business services are needed to facilitate the increasing complexity of this activity and related industrial production.

3.4. Beneficial FDI for Africa—sectoral employment growth

The creation of employment for poverty reduction is a key objective in many African development studies (The African Union’s Agenda 2063, UN-Habitat’s New Urban Agenda (2016), AfDB’s 2013-2022 Strategy and the UN’s SDG 1, among others). It is therefore arguable that, whenever FDI generates high levels of employment, this would be beneficial to achieving the stated poverty reduction goals. This section will firstly discuss employment volumes in the major aggregation classes (hi-tech, services, manufacturing and resources),

Figure 3.6. African FDI sectors—direct employment by growth and volume (2003-2016)



Blue dots: volume of employment X axis: rank of employment
Source: Wall, 2017. Based on fDi Markets data

followed by more detailed analysis of 39 sectors of FDI employment growth over the period 2003-2016. It is important to note, however, that the analysis focuses only on jobs directly created by multinationals in these classes and sectors and does not take into account the spill-over of indirect employment generated.

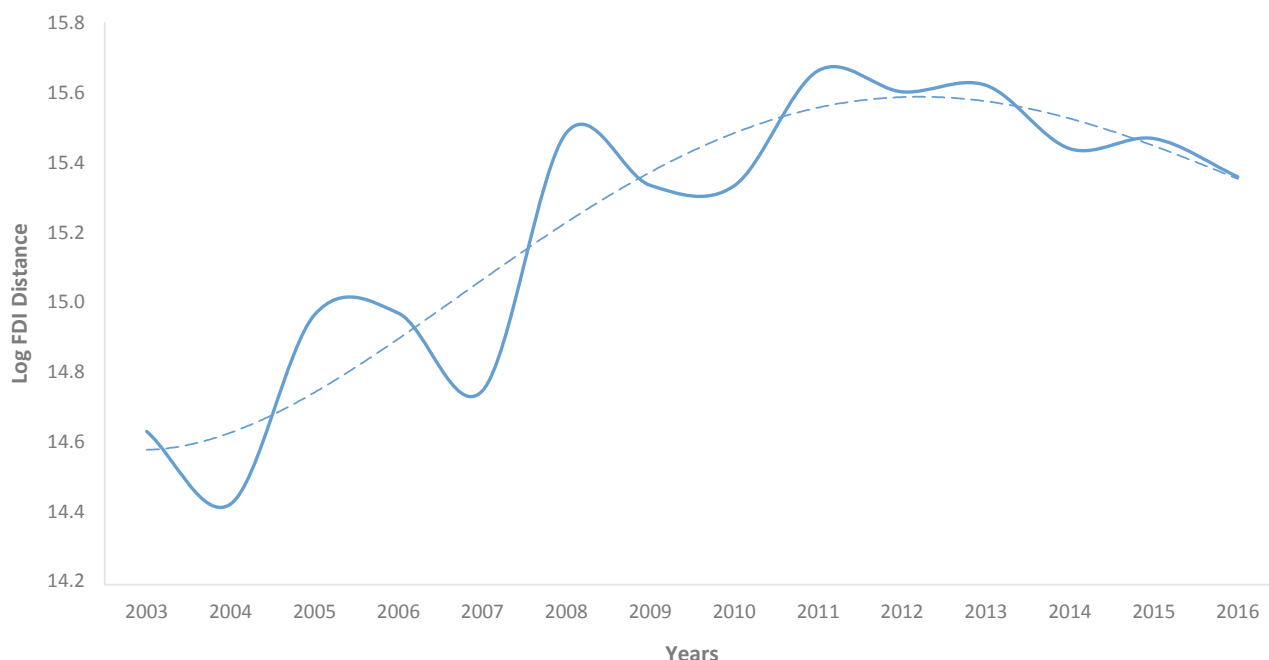
The scatterplot of Figure 3.5 shows the performance of the four major classes (hi-tech, services, manufacturing and resources) by employment growth and volume. It is evident that in Africa the hi-tech sector has the most rapid employment growth rate despite having the smallest employment number. This implies that, relative to the other classes, hi-tech only generated a limited number of direct jobs (most likely for high-end employees) over this period. For both the pre-recession (2003-2009) and recession (2010-2016) periods, a relatively stable and positive growth is recorded. Thus, in terms of stability in volatile times hi-tech can be an interesting sector for African governments to seek future FDI. That is moreover so, since it can also boost much needed technological innovation in African countries. Kaur et.al (see also part B of this report) also show that hi-tech FDI has the potential to reduce income inequality in African countries, particularly

It is evident that in Africa the hi-tech sector has the most rapid employment growth rate despite having the smallest employment number. This implies that, relative to the other classes, hi-tech only generated a limited number of direct jobs over this period

through backward linkages with the manufacturing sector. It would be interesting to explore in the future the spill-over effect that the hi-tech sector can have on local business and related employment. Nonetheless, in terms of direct employment, the volumes are limited and do not adequately challenge the dire unemployment in Africa.

Figure 3.5 further shows that the services sector has employment growth rates similar to hi-tech, but with a far greater volume of employment (second largest of the four categories). On the other

Figure 3.7. The geographic reach of FDI into Africa (2003-2016)



The solid blue line: the total distance of investments (km) The dotted line: the trend over time
Source: Wall, 2017. Based on fDi Markets data



Medium-sized cities like Mombasa need to focus their strategies on national and regional investment

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hand, services' direct employment has declined quite sharply from 18.2% in 2003-2009 to 2.2% in 2010-2016. Although the attraction of services FDI may appeal to governments, it is likely to be more difficult to realize.

FDI into manufacturing saw good growth over the entire period (4.8%) and had the largest volume of employment (62%), making it a very attractive sector. Indeed, manufacturing FDI is the most important for reducing income inequality in African countries (see also Part B), since it tends to generate a lot of employment and has the potential to accelerate industrialization in Africa by means of backward and forward linkages with other sectors. Nonetheless, its sharp drop from 17.4% growth in 2003-2009 to 0.4% in 2010-2016 should be taken into account. More recently, investors have been reluctant to invest in this sector and it may be less easy to attract them in the future.

Lastly, Figure 3.5 shows that FDI into resources has experienced a strong negative growth (-12.6%) over the 2003-2016 period. Even when we look at its pre-recession boom phase, employment in resources initially decreased a moderate -4.9% but next escalated to -23.3% in the recession period. Besides this, the resources sector's volume of employment is the second smallest of the four classes. These developments are very much related to the drop in commodity prices over the past years. Moreover, FDI in the resources sector typically only generates two jobs per USD million FDI (see Wall, Mehta and Kaur). Resources FDI is also likely to be difficult to attract when the global commodity price is low, besides its very limited benefit to employment generation. An arguably positive aspect of the foregoing would be that resource-rich countries are forced to diversify into manufacturing, services and hi-tech branches.

Next, the same type of analysis is applied to the more detailed sectoral level. The table in Online Appendix 1.5 (bottom part) shows volumes and exponential growth rates of employment in diverse FDI sectors. This should be read in conjunction with the scatterplot of Figure 3.6. It shows that hi-tech FDI, renewable energy, pharmaceuticals, engines and turbines, as well as software and IT, generate the highest employment growth rates in Africa, although the employment volumes are modest. Within manufacturing FDI (Figure 3.6), industrial (machinery, building and construction, electronics components, automotive components, consumer products, real estate, consumer electronics, food, textiles, plastics and automotive industries), real estate, food, textiles and automotive industries are especially interesting for providing large volumes of employment.

In the services sector (Figure 3.6), warehousing and storage, business services, transportation, healthcare, financial services and communication all have high growth rates of employment. Communications, financial services and business services are particularly interesting with similarly respectable volumes of employment. Lastly, resource sectors FDI have experienced very negative growth in Africa, particularly coal, oil and natural gas, minerals, and metals. Metals do however maintain a very high volume of employment (15.9%) and, therefore, remain interesting for development policy towards poverty eradication.

3.5. The global reach of FDI into Africa

Because every investment takes place between an international city and an African city, the physical distance of the investment (in km) can be established. For instance, an investment from Shanghai into Nairobi takes place at a much longer distance than an investment from Johannesburg into Nairobi. If we add up all the investment distances to a city like Nairobi and then take the average, we get a measure of the “global reach” of investment into Nairobi. This can be calculated for each year and, if plotted in a graph, will depict whether the average investment into Nairobi is increasingly from closer or more distant sources. If this is done for all cities in world, an indicator of global reach can be plotted. This is shown in the graph (see Online Appendix 1.6).

The average global reach of FDI in the world increased from 2003 to 2011 but it has gently declined since then. This implies that investors have

been globalizing through direct investment into increasingly distant centres. As a consequence, widely flung cities have become more globally connected. The declining trend since 2011, however, could in part be the result of lower risk appetite in the aftermath of the global financial crises and in part due to geopolitical tensions and political instability within some parts of the world. The recent re-emergence of economic nationalism in some key economies could mean more bilateralism in globalization dynamics.

The average global reach of FDI in the world increased from 2003 to 2011 but it has gently declined since then. This implies that investors have been globalizing through direct investment into increasingly distant centres

In the graph in Figure 3.7, we see that the average global reach of FDI into Africa clearly followed the global trend. Between 2003 and 2011, investments into Africa increasingly came from more distant sources. Since 2011, however, there has been a mild reversal of this trend. From the Smart City study by Wall and Stavropoulos (2016) (see Part B of the online version of the report) it is clear that the higher the global reach of a city within the world FDI system, the higher the level of city smartness. This is arguably because the economically largest multinationals are not constrained by distance and hereby have the ability to invest across the globe, while smaller firms tend to operate more regionally. The above findings indicate that municipalities should develop stringent international marketing strategies for attracting investors through, for instance, investment promotion agencies (IPAs), smart procurement agencies (SPAs) and competition commissions. The aim should be to increase the global and regional portfolio of foreign investors into their city. International hubs like Cairo, Johannesburg, Lagos and Nairobi should focus more on both global and African continental expanse e.g. SADC and ECOWAS. Medium-sized cities like Durban and Mombasa, in contrast, should be more geared to improving national and regional investment expansion.



Healthcare has experienced one of the highest rates of growth in FDI in Africa

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4. Forecasts of global FDI into African regions and countries



A concentration of FDI in extractive industries (e.g. the oil sector), can render economies susceptible to illegal financial and economic leakages

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4.1. Introduction to forecasting

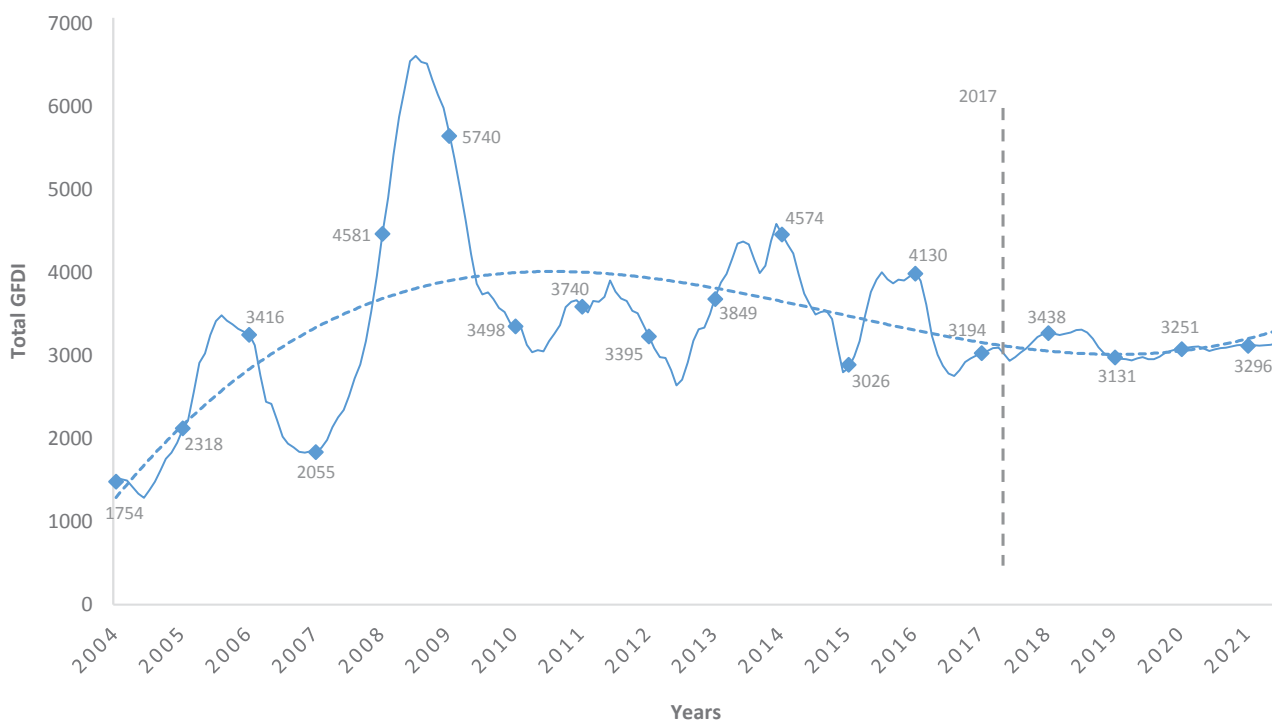
Where the previous section has explored the trends of FDI into Africa, this section will go a step further, using ARIMA models for the forecasting section of this chapter. Although these models will not be explained here as that would go well beyond the scope of this report, those that are interested are referred to Online Appendix 1.7.

Although FDI flows have expanded remarkably since the 1990s in all sub-regions of Africa, growth in investment has differed significantly between regions and sectors (Suleiman et al., 2013). Historically, Northern Africa has performed better in attracting FDI than the other regions, arguably because of its natural resource endowment and its proximity to Europe. In the southern region of Africa, South Africa has significantly outperformed its neighbours in capturing investment (Mijiyawa, 2012). Other countries receiving a comparatively large share of FDI are Algeria, Angola, Morocco and Nigeria (Dupasquier and Osakwe, 2005). Initially, FDI flows into the continent concentrated largely on resources, making this sector the largest recipient of FDI in African economies (Suleiman, 2013).

Historically, Northern Africa has performed better in attracting FDI than other regions, arguably because of its natural resource endowment and its proximity to Europe

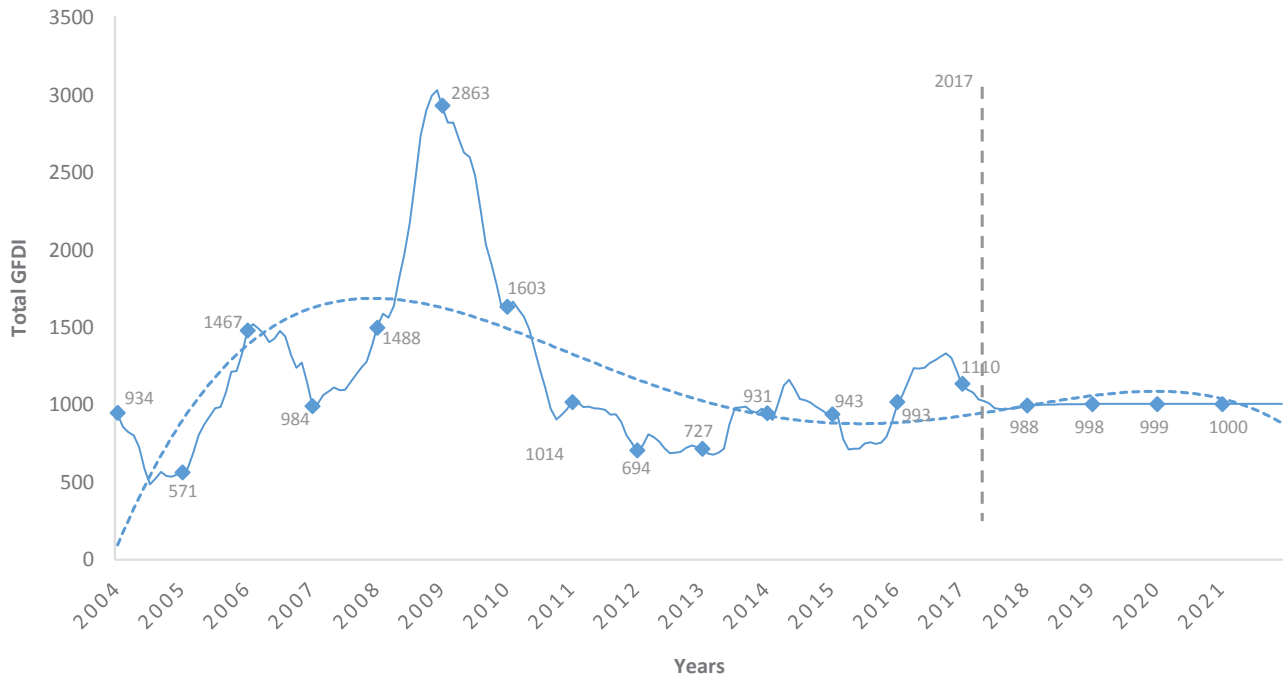
Although FDI growth in Sub-Saharan Africa is said to be resilient (Beny and Cook, 2009; Andersen and Jensen, 2014), no consensus has been reached on the sustainability of FDI-fed growth patterns (Arbache and Page, 2010; Barbi and Costa, 2016). Moreover, a concentration of FDI in the resources sector, especially the extractive industries (e.g. the oil sector), can render economies susceptible to illegal financial and economic leakages and sub-optimal development of domestic economic linkages. This inhibits economic growth (Adams, 2009) and balanced economic development. A shift in FDI emphasis away from the (primary) resources sector to the secondary and tertiary sectors can therefore increase

Figure 4.1. Forecast of FDI into Africa (2004-2021)



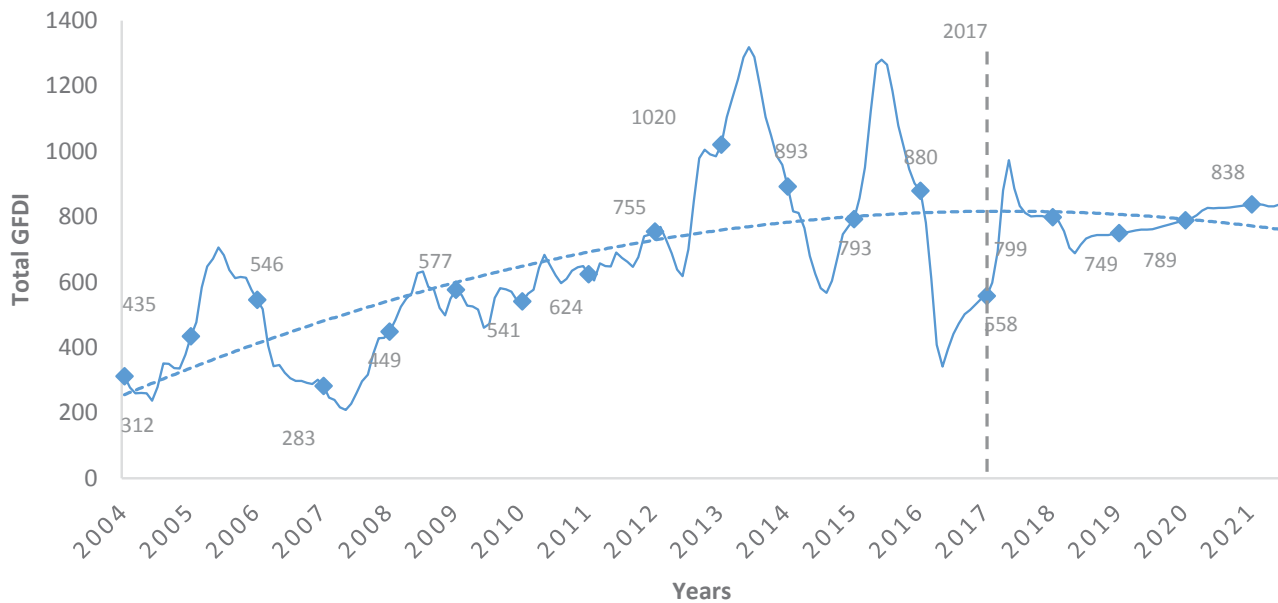
Source: Rutten and Wall, 2017. Based on fDi Markets data

Figure 4.2. Forecast of FDI into Northern Africa (2004-2021)

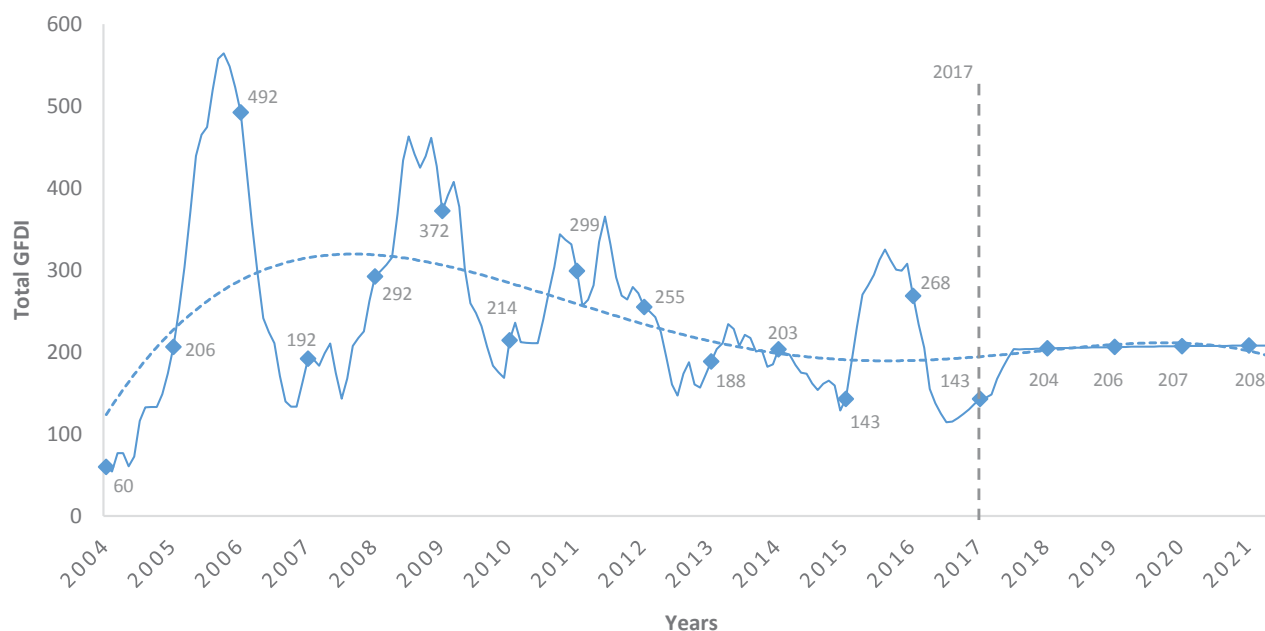


Source: Rutten and Wall, 2017. Based on fDi Markets data

Figure 4.3. Forecast of FDI into Western Africa (2004-2021)



Source: Rutten and Wall, 2017. Based on fDi Markets data

Figure 4.4. Forecast of FDI into Central Africa (2004-2021)

Source: Rutten and Wall, 2017. Based on FDI Markets data

the developmental impact of FDI (Akinlo, 2004). Hence, in this section, by forecasting FDI flows for different core sectors (classes) and the five key African regions, insight can be gained into the likely future distribution of FDI inflows and assist policy makers in economic planning and strategy development.

4.2. FDI forecasts for Africa and its five key regions FDI into Africa

Figure 4.1 shows how the trend of FDI flows into Africa has fluctuated over time (solid dark blue line). The time series-based modelling indicates that, over the five years until 2021, total FDI into the continent is expected to increase modestly. However, this refers to the whole of Africa and predictions also differ greatly between regions and sectors. (Online Appendices 1.8 to 1.47). Whereas towards the end of the 1990s African FDI was concentrated mostly in the primary sector, investments clearly shifted towards the secondary and tertiary sectors thereafter (Mwilima, 2003). The increase of FDI into these sectors has arguably contributed to the economic growth of African cities and possibly also to more sustainable forms of economic growth and

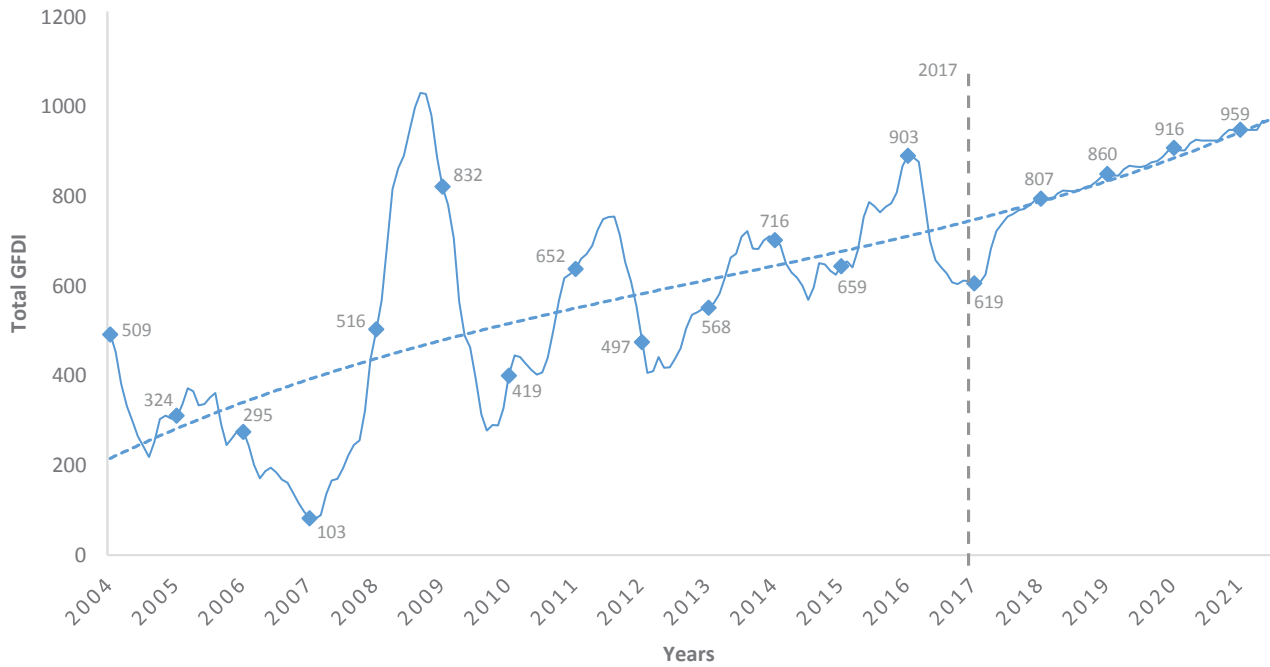
FDI into the Services and Manufacturing Sectors is likely to maintain stable growth while FDI into the Resources sector will grow only slowly

development. The probability of the latter outcome can be increased if African governments commit themselves to policy reforms attracting types of FDI that promote economic sustainability and generate jobs, especially in the secondary and tertiary sectors (Adams, 2009; Suleiman et al., 2013). The analysis also suggests that FDI into the African hi-tech sector should expand dramatically (see Online Appendix 1.8). Furthermore, FDI into the services and manufacturing sectors is likely to maintain stable growth (see Online Appendices 1.11 and 1.9) while FDI into the resources sector will grow only slowly. (See Online Appendix 1.10).

FDI into Northern Africa

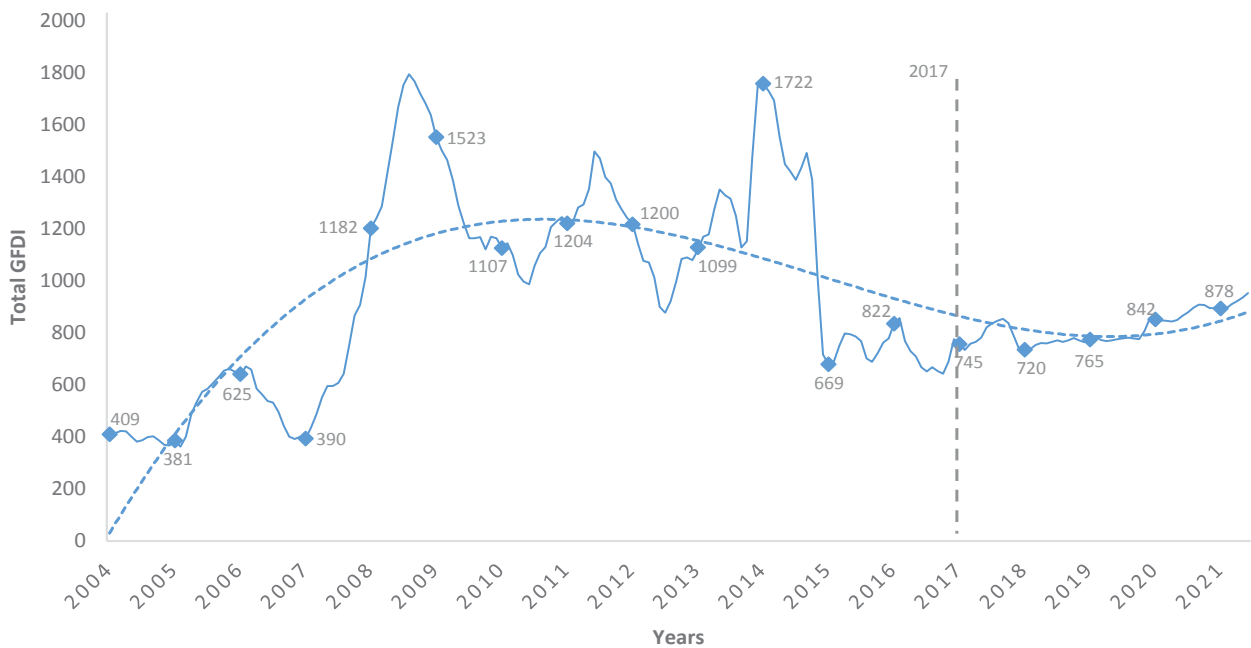
The Northern African region had the highest volume of FDI and it is expected to remain stable over the

Figure 4.5. Forecast of FDI into Eastern Africa (2004-2021)



Source: Rutten and Wall, 2017. Based on fDi Markets data

Figure 4.6. Forecast of FDI into Southern Africa (2004-2021)



Source: Rutten and Wall, 2017. Based on fDi Markets data

coming years (Figure 4.2). Growth in FDI in the region is mostly expected to be in the hi-tech (Online Appendix 1.12) and services sectors (Online Appendix 1.15), while for resources, growth will be modest. The services sector is likely to overtake the manufacturing sector as the main recipient of FDI in the region (Online Appendix 1.13). The overall trend of foreign investment into the region has been negative and this will continue for parts of the region. This is likely the outcome of enduring impacts of the Arab Spring on Northern Africa FDI and the region's persistent relative dependency on its oil endowment despite the beneficial proximity to EU markets. FDI into Algeria (Online Appendix 1.34), Libya (Online Appendix 1.36) and Tunisia (Online Appendix 1.35) will remain relatively low in future, while FDI into Egypt (Online Appendix 1.32) and particularly Morocco (Online Appendix 1.33) is likely to recover from the global financial crisis and regional political instability.

FDI into Western Africa

FDI into the Western African region has increased since the financial crisis of 2008, a trend that is expected to continue (Figure 4.3). Investments into the hi-tech (Online Appendix 1.16) and manufacturing sectors (Online Appendix 1.17) will expand relative to other sectors, while the manufacturing sector will continue to have the highest absolute value of FDI. The declining trend in resources FDI (Online Appendix 1.18) is expected to continue with investment stagnation in the resources sector despite the historic importance of the region's oil sector in attracting FDI. Investments into the Western African region's services sector (Online Appendix 1.19) are projected to decline unless conditions change (e.g. better regional integration, less corruption and more transparent governance).

For Nigeria, the largest economy in the region, FDI is expected to increase despite its recent decline (Online Appendix 1.37). Since 2010, FDI into Côte d'Ivoire has risen and is expected to continue (Online Appendix 1.38). Although FDI into Ghana increased from 2010, it began decreasing from 2014, a trend that is expected to persist over the next five years (Online Appendix 1.43).

FDI into Central Africa

FDI growth in Central Africa has stagnated over the past 10 years and is expected to stay at

current levels. Central Africa is the region with the smallest share of FDI flows (Figure 4.4). The level of FDI into the manufacturing (Online Appendix 1.21) and services sectors (Online Appendix 1.23) will remain stable, while FDI into the resources sector will continue to decline (Online Appendix 1.22). FDI into the hi-tech sector has been sparse and is not expected to grow much over the next five years (Online Appendix 1.20). The slight downward trend of Democratic Republic of Congo FDI will likely continue (Online Appendix 1.39), while FDI into Rwanda is expected to increase, making it one of the more promising economies in the region (Online Appendix 1.40).

FDI into Eastern Africa

Total FDI into the Eastern African region has grown consistently since 2000. The forecast suggests this trend will remain positive and FDI into the region will increase (Figure 4.5). The manufacturing sector (Online Appendix 1.25) will continue to have both the most investment and a positive growth trend. FDI into the services sector will experience the highest rate of growth over the coming five years (Online Appendix 1.27), whereas FDI in the resources sector will continue to decline (Online Appendix 1.26). FDI into Kenya is expected to grow further over the coming five years (Online Appendix 1.41). In Ethiopia, a country that has only attracted significant investments since 2014, FDI is expected to stay at its current level (Online Appendix 1.42). Tanzania's FDI is expected to grow further, but it has been highly volatile over the past decade and a significant acceleration is difficult to foresee for the near term (Online Appendix 1.44).

FDI into Southern Africa

Based on the time series analysis, FDI is anticipated to rise marginally in Southern Africa, suggesting a tentative recovery from the decline of investments that occurred in 2014 (Figure 4.6). The trend of FDI into the services sector is foreseen to be the most promising, followed by the manufacturing sector. Hi-tech FDI in Southern Africa should increase modestly, while FDI into the resources sector is expected to strongly decline. At the country level, South Africa will remain the top future destination for FDI in the region. Zambia is expected to recover from its negative FDI trend, while Mozambique's situation will improve slightly relative to 2016.

5. African cities' economic competitiveness, specialization and diversification



Marketing and branding to attract investment have become a booming business

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5.1. Competition amongst cities for FDI

In the modern economy, cities are assumed to be in fierce competition for resources, markets and economic influence. Despite the rich theoretical discourse on these 'place wars,' little attention has been paid to measuring the intensity of competition between cities. Drawing on theoretical work by Gordon (1999) and using insights from evolutionary and organizational ecology, this section introduces an indicator for estimating the degree of competition of African cities based on patterns of interaction (networks) between these cities as well as defining who their primary competitors are. This analysis sheds light on the

importance of regional diversification as a means to strongly improve the attraction of FDI to African cities. It is hypothesized that the more FDI sector diversity a city attracts, the more overall FDI it will receive. In other words: a city that only attracts a few FDI sectors will in general only attract low volumes of FDI.

In recent decades, urban studies and planning literature acknowledged that cities compete in terms of product markets and inward investments, as well as the establishment of firms, population, tourists, hallmark events and government funding (Harvey, 1989; Lever and Turok, 1999). These inter-city place wars (cf. Haider, 1992) in various markets can take

place on local, regional, national, continental, or even global scales (Gordon, 1999). In a world in which the role of physical distance is declining (Cairncross, 2001; Friedman, 2007) cities have to work on their competitiveness or their ability to successfully compete with other cities in attracting firms and workers to maintain or strengthen their position within the global, regional or national urban hierarchy and increase their standard of living (Porter, 1990; Friedmann, 1995; Storper, 1997). Today, the competition between cities is at an all-time high and local authorities put ever more effort into making their cities attractive locations.

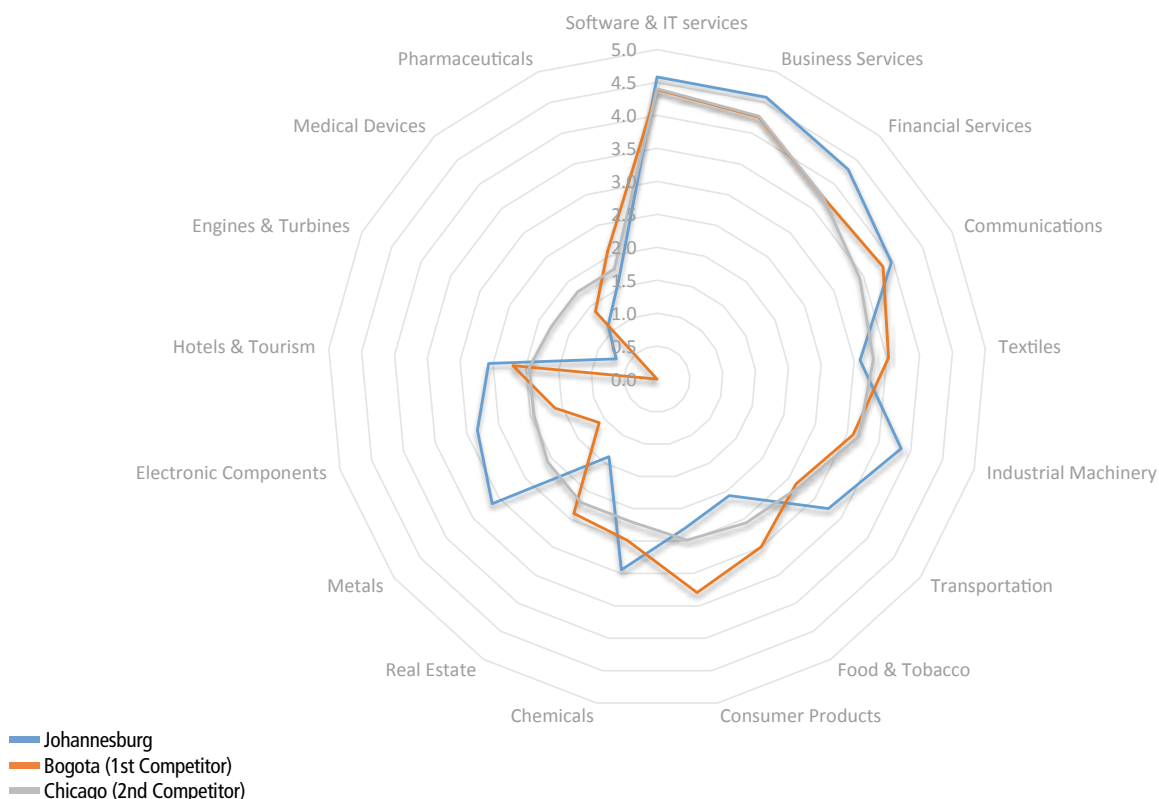
In this context, cost reduction for targeted populations (e.g. tax credits or project financing) is pivotal to attracting and retaining firms and workers but so is the provision of amenities, physical infrastructure and public transportation networks. Consequently, city marketing and city branding have become a booming business (Paddison, 1993; Van den Berg and Braun, 1999) while budgets for place

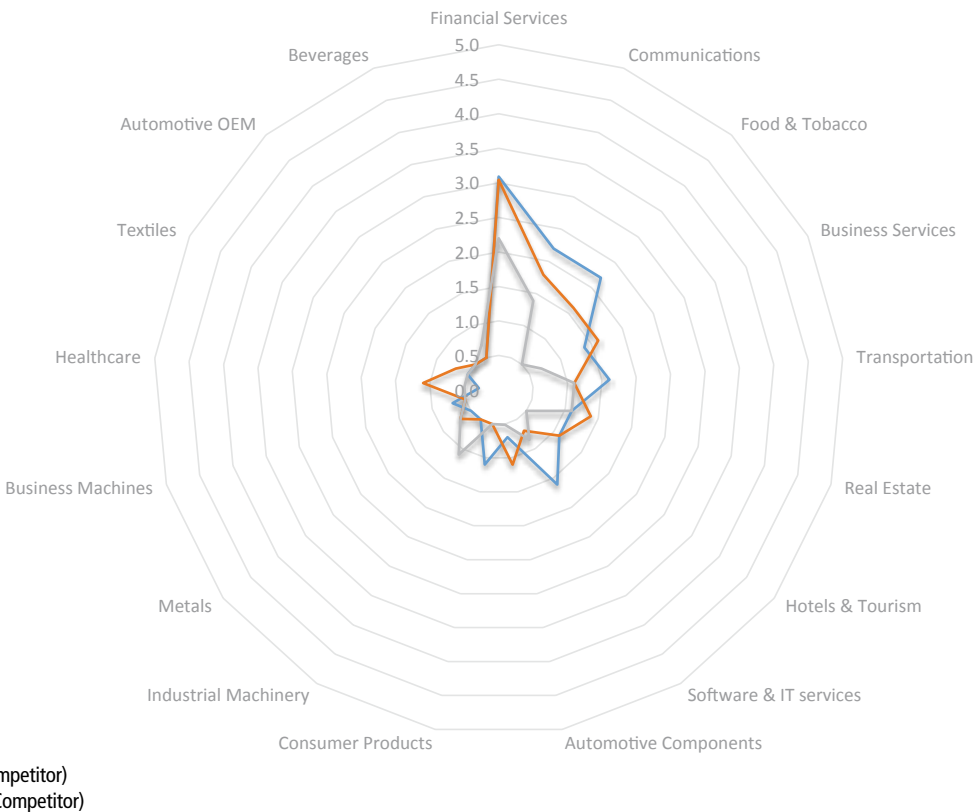
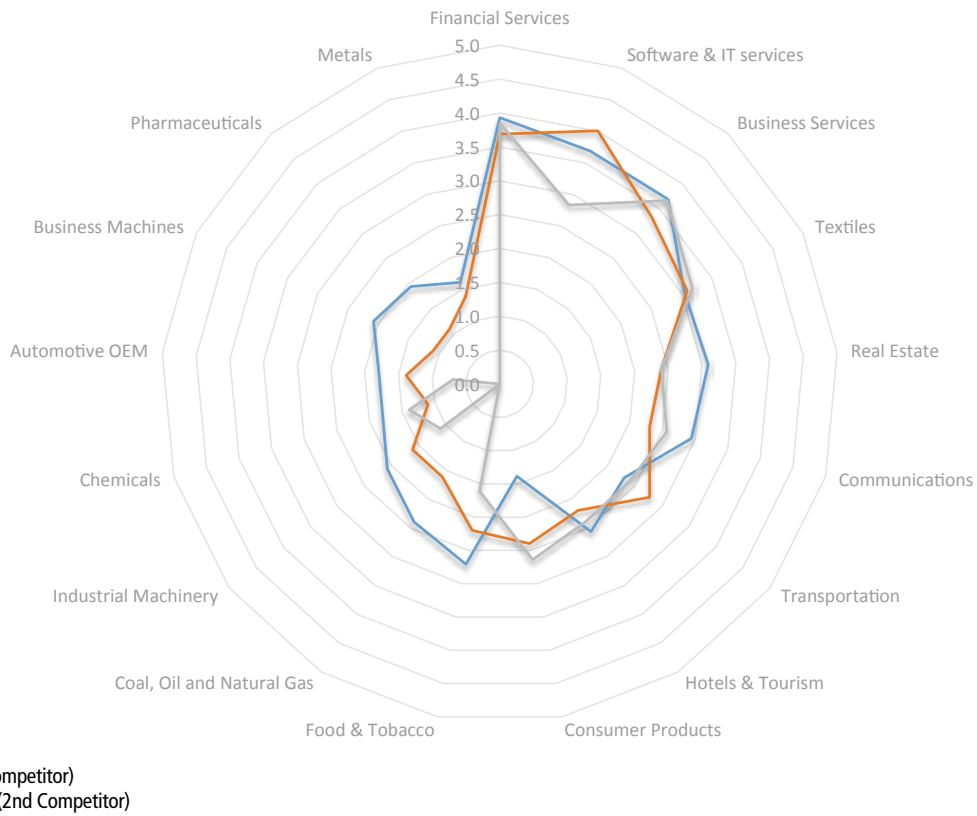
Although most studies on urban competitiveness assume that cities compete vis-à-vis one another, little attention is paid to actually measuring the intensity of competition between cities

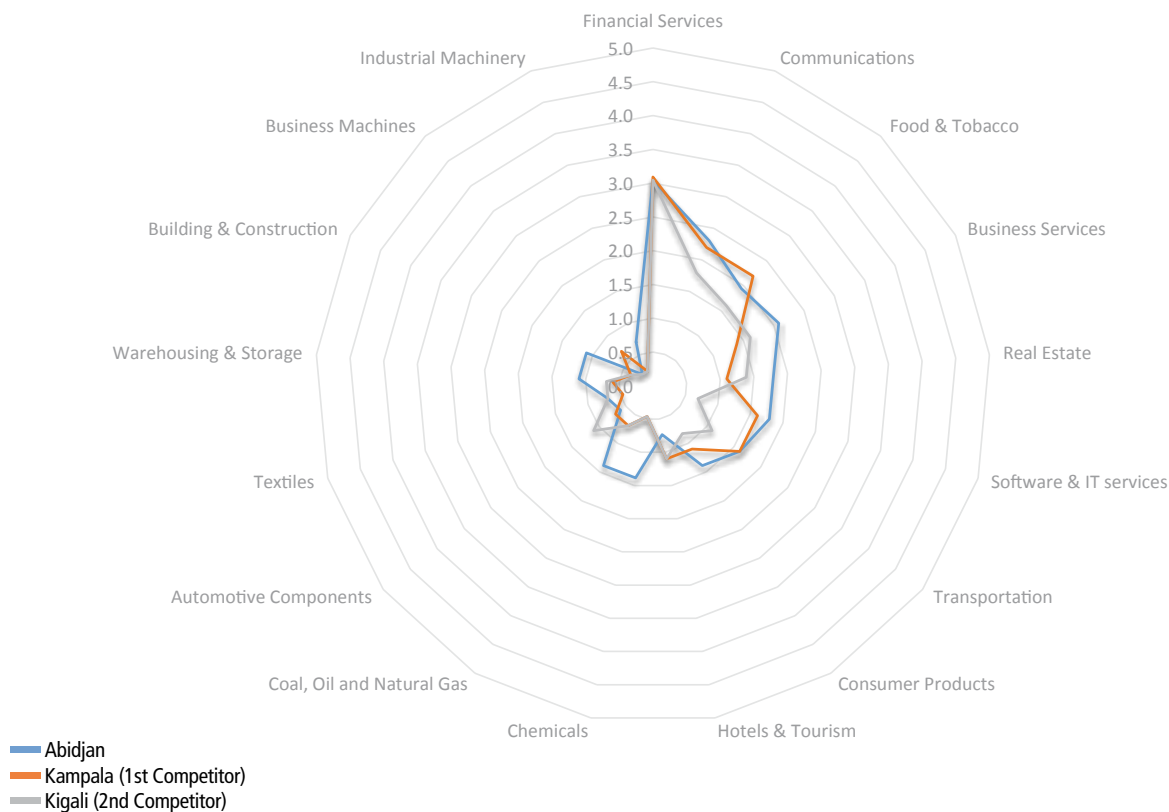
promotion are ever increasing (Hall and Hubbard, 1996; LeRoy, 2005).

Despite a plethora of contemporary research and policy, empirical evidence on urban competition remains relatively weak. Although most studies on urban competitiveness assume that cities compete vis-à-vis one another, little attention is paid to actually measuring the intensity of competition between cities. However, to validate a concept of urban competitiveness, it is important to understand to what extent cities compete and where this

Figure 5.1. African competitor cities, based on similarity of FDI sectors (2003-2016)







Source: Wall, 2017. Based on fDi Markets data

competition comes from. Shifting our focus from urban competitiveness to urban competition will enrich our understanding of competitive cities (Burger et al., 2013) by providing a method of deducing the strongest competitors and relaxing the stringent theoretical assumption that all cities compete against each other (see, e.g. Haider, 1992; Markusen and Schrock, 2006). In this section the competitive strength of all global cities is calculated based on their sectors of investment.

5.2. The investment competitors of Abidjan, Cairo, Johannesburg and Kigali

The model used to calculate competition amongst cities is called the 'Manhattan Distance Model'. The technicalities will not be explained here as these go beyond the scope of this report, but for those interested, a link to a description of the technique is provided in Online Appendix 1.48.

In simple terms, the model is based on the concept that any two cities receiving the same

volume of investments in exactly the same industrial sector(s) will be perfect competitors because they are equally interesting to foreign investors. It implies that either city can be substituted by the other. By knowing the size and sectors of investment for every city in the world, the exact competitors for any city can be calculated and ranked. This becomes clearer when we look at the radar diagrams of the four case cities in this report, namely Abidjan, Cairo, Johannesburg and Kigali (Figure 5.1).

After the Manhattan Distance Model had been applied to the FDI data, the main global competitors for each of these cities were defined and ranked accordingly (see Table 5.1). For Johannesburg the main global competitors proved to be Bogota (1st), Chicago (2nd), Istanbul (3rd), Delhi (4th) and Buenos Aires (5th). It means that these cities specialize in the same FDI sectors as Johannesburg and also have the same distribution of FDI sectors as Johannesburg. In the case of Cairo, its true competitors are Al Manamah (1st), Vilnius (2nd), Lima (3rd), Kiev (4th), and Riyadh (5th). For Abidjan they turned out to

Table 5.1.
 The top five competitors of six selected cities—at thirteen geographic scales (2003-2016)

World Region	Competitor	Shanghai	New York	Johannesburg	Cairo	Abidjan	Kigali
World	1st	Dubai	Sydney	Bogota	Al Manamah	Kampala	Kampala
	2nd	Hong Kong	Dublin	Chicago	Vilnius	Kigali	Vientiane
	3rd	Singapore	Paris	Istanbul	Lima	Dar es Salaam	Lusaka
	4th	Beijing	Tokyo	Delhi	Kiev	Vientiane	Dakar
	5th	Paris	Madrid	Buenos Aires	Riyadh	Lahore	Addis Ababa
Africa	1st	Johannesburg	Johannesburg	Cape Town	Nairobi	Kampala	Kampala
	2nd	Casablanca	Cape Town	Casablanca	Accra	Kigali	Lusaka
	3rd	Nairobi	Cairo	Nairobi	Casablanca	Dar es Salaam	Dakar
	4th	Cape Town	Nairobi	Cairo	Tunis	Dakar	Addis Ababa
	5th	Cairo	Casablanca	Lagos	Lagos	Addis Ababa	Abidjan
Asia and Pacific	1st	Hong Kong	Sydney	Delhi	Auckland	Vientiane	Vientiane
	2nd	Singapore	Tokyo	Manila	Baku	Lahore	Jinan
	3rd	Beijing	Hong Kong	Jakarta	Almaty	Dhaka	Dushanbe
	4th	Tokyo	Beijing	Seoul	Rangoon	Karachi	Ipoh
	5th	Sydney	Melbourne	Hanoi	Brisbane	Islamabad	Nanning
Latin America	1st	São Paulo	São Paulo	Bogota	Lima	Medellin	Caracas
	2nd	Mexico City	Mexico City	Buenos Aires	San Jose	Caracas	Recife
	3rd	Buenos Aires	Bogota	Santiago	Panama City	Montevideo	Medellin
	4th	Bogota	Buenos Aires	Rio de Janeiro	Guadalajara	Santo Domingo	Cali
	5th	Santiago	Santiago	Mexico City	Santiago	Cali	Cordoba
Middle East	1st	Dubai	Abu Dhabi	Riyadh	Al Manamah	Baghdad	Damascus
	2nd	Abu Dhabi	Ad Dawhah	Ad Dawhah	Riyadh	Arbil	Salalah
	3rd	Ad Dawhah	Riyadh	Abu Dhabi	Muscat	Damascus	Baghdad
	4th	Riyadh	Jeddah	Al Manamah	Amman	Tehran	Arbil
	5th	Jeddah	Al Manamah	Tel Aviv-Yafo	Jeddah	Salalah	Basra
North America	1st	Manhattan	Toronto	Chicago	Washington	Baltimore	McAllen
	2nd	Toronto	San Francisco	Montréal	Calgary	McAllen	Nashville
	3rd	Los Angeles	Los Angeles	Atlanta	Dallas	Halifax	Tampa
	4th	San Francisco	Vancouver	Houston	Atlanta	Tampa	Kansas City
	5th	Houston	Chicago	Los Angeles	Seattle	Nashville	Tempe
Rest of Europe	1st	Moscow	Moscow	Istanbul	Vilnius	Sarajevo	Limassol
	2nd	Bucharest	Warsaw	Warsaw	Kiev	Constanta	Samara
	3rd	Warsaw	Prague	Vilnius	Bratislava	Lefkosia	Valletta
	4th	Istanbul	Istanbul	Prague	Krakov	Ljubljana	Lefkosia
	5th	Budapest	Budapest	Kiev	Belgrade	Odesa	Banja Luka
West Europe	1st	Paris	Dublin	Zurich	Luxembourg	Malaga	Innsbruck
	2nd	Madrid	Paris	Helsinki	Glasgow	Alicante	Murcia
	3rd	Dublin	Madrid	Dusseldorf	Geneva	Bern	Padova
	4th	Barcelona	Berlin	Brussels	Lisbon	Derby	Alicante
	5th	Frankfurt	Amsterdam	Copenhagen	Rome	Dundalk	High Wycombe

Central Africa	1st	Douala	Douala	Douala	Kinshasa	Douala	Douala
	2nd	Kinshasa	Kinshasa	Kinshasa	Douala	Kinshasa	Kinshasa
	3rd	Yaounde	N'Djamena	Yaounde	Lubumbashi	N'Djamena	N'Djamena
	4th	Lubumbashi	Yaounde	Lubumbashi	N'Djamena	Yaounde	Lubumbashi
	5th	N'Djamena	Lubumbashi	N'Djamena	Yaounde	Lubumbashi	Yaounde
Eastern Africa	1st	Nairobi	Nairobi	Nairobi	Nairobi	Kampala	Kampala
	2nd	Dar es Salaam	Dar es Salaam	Dar es Salaam	Kampala	Kigali	Addis Ababa
	3rd	Kampala	Kampala	Kampala	Dar es Salaam	Dar es Salaam	Khartoum
	4th	Kigali	Addis Ababa	Addis Ababa	Addis Ababa	Addis Ababa	Dar es Salaam
	5th	Addis Ababa	Kigali	Kigali	Kigali	Khartoum	Juba
Northern Africa	1st	Casablanca	Cairo	Casablanca	Casablanca	Tripoli	Alexandria
	2nd	Cairo	Casablanca	Cairo	Tunis	Alexandria	Tripoli
	3rd	Tunis	Tunis	Tunis	Algiers	Algiers	Agadir
	4th	Algiers	Algiers	Algiers	Tripoli	New Cairo City	6th of October
	5th	Tangier	Tripoli	Tangier	Rabat	Rabat	Giza
Southern Africa	1st	Johannesburg	Johannesburg	Cape Town	Cape Town	Lusaka	Lusaka
	2nd	Cape Town	Cape Town	Luanda	Luanda	Maputo	Harare
	3rd	Luanda	Luanda	Durban	Maputo	Harare	Windhoek
	4th	Durban	Maputo	Maputo	Durban	Windhoek	Maputo
	5th	Maputo	Durban	Pretoria	Pretoria	Durban	Gaborone
Western Africa	1st	Lagos	Lagos	Lagos	Accra	Abidjan	Dakar
	2nd	Accra	Accra	Accra	Lagos	Dakar	Abidjan
	3rd	Abidjan	Abidjan	Abidjan	Abidjan	Kumasi	Kumasi
	4th	Dakar	Dakar	Dakar	Dakar	Tema	Abuja
	5th	Abuja	Abuja	Abuja	Kumasi	Sekondi-Takoradi	Tema

Source: Wall, 2017. Based on fDi Markets data

be Kampala (1st), Kigali (2nd), Dar es Salaam (3rd), Vientiane (4th) and Lahore (5th). Lastly, for Kigali it is Kampala (1st), Vientiane (2nd), Lusaka (3rd), Dakar (4th) and Addis Ababa (5th).

It is important to note that these initial results do not take the geographic proximity of cities into account but are based purely on similarity of FDI sectors and the number of investments (count). Figure 5.1 shows why these cities are competitors. If we look at the radar diagram of Johannesburg we see that its strength of investment is represented by the blue line. The city in the world that closest matches this is Bogota, shown by the red line. If these cities were perfect competitors (100%) then these lines would overlap exactly with one another. In general, the FDI market overlap ranges from 0% (zero competition) to 100% (perfect competition). The green line, which represents the FDI sectors of Chicago, matches Johannesburg's blue line less than that of Bogota and is therefore the 2nd (less perfect) competitor of Johannesburg after Bogota.

If we look at Cairo's competitors we see a similar relationship, as is the case with Abidjan and Kigali, albeit that the four case study cities compete for different sectors. This underlines the theoretical assumption that, indeed, not all cities in the world compete for the same FDI (Markusen and Schrock, 2006). It is also clear that Johannesburg competes at a much higher league of cities (e.g. Bogota and Chicago) than a city like Kigali, which receives less investment. Kigali's competitors are clearly smaller, regional cities like Addis Ababa, Dakar, Kampala and Lusaka.

Table 5.1 reveals that "alpha" global cities like Shanghai and New York compete in an even higher urban league than Johannesburg. In the case of Shanghai, the competitors include Dubai (1st), Hong Kong (2nd), Singapore (3rd), Beijing (4th) and Paris (5th). For New York, it is Sydney (1st), Dublin (2nd), Paris (3rd), Tokyo (4th) and Madrid (5th). Whereas Shanghai and New York are both top-end global attractors of FDI, they are not actually strong competitors of each other, since they have different



Bogotá is ranked as the main global competitor to Johannesburg in terms of attracting FDI under the methodology of the Manhattan Distance Model

© Juan Carlos Tinjaca

sectoral investment profiles. Table 5.1 also shows that if we add geographic specification, different sets of competitors for each city emerge. For instance, in the case of Johannesburg, its top African competitors prove to be Cape Town (1st), Casablanca (2nd), Nairobi (3rd), Cairo (4th) and Lagos (5th). Likewise, Johannesburg's top competitors can be identified for each major global region (Table 5.1).

Lastly, competitor cities within the different African regions are shown. For instance, Johannesburg's top competitors in Eastern Africa are Nairobi (1st), Dar es Salaam (2nd), Kampala (3rd), Addis Ababa (4th) and Kigali (5th). This is illustrated further in Figure 5.4. Since each case study city attracts FDI from entirely different sources, marketing and acquisition for future FDI would require

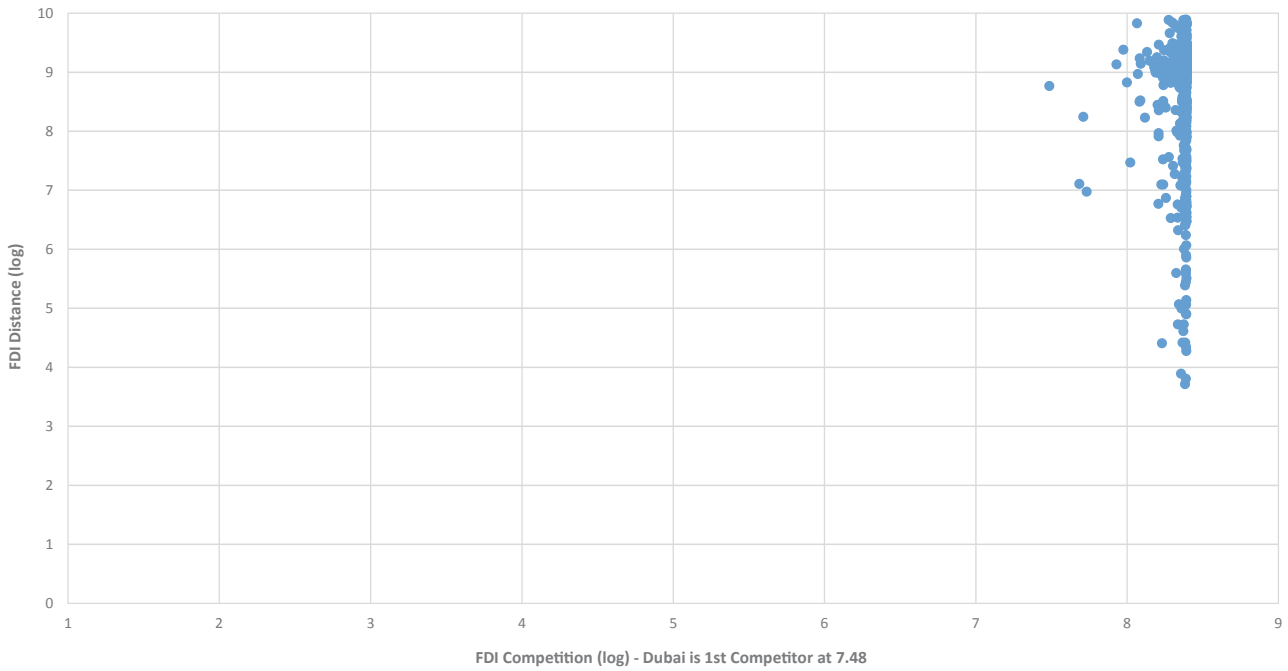
strengthening ties with entirely different FDI source cities. It again underlines that cities are not in equal competition with one another, and that there are different ecosystems of competition. For policymakers, this implies that it is critically important to know which cities attract the same type of FDI profiles, and are hence their true competitors.

5.3. FDI sectoral diversification and specialization of cities

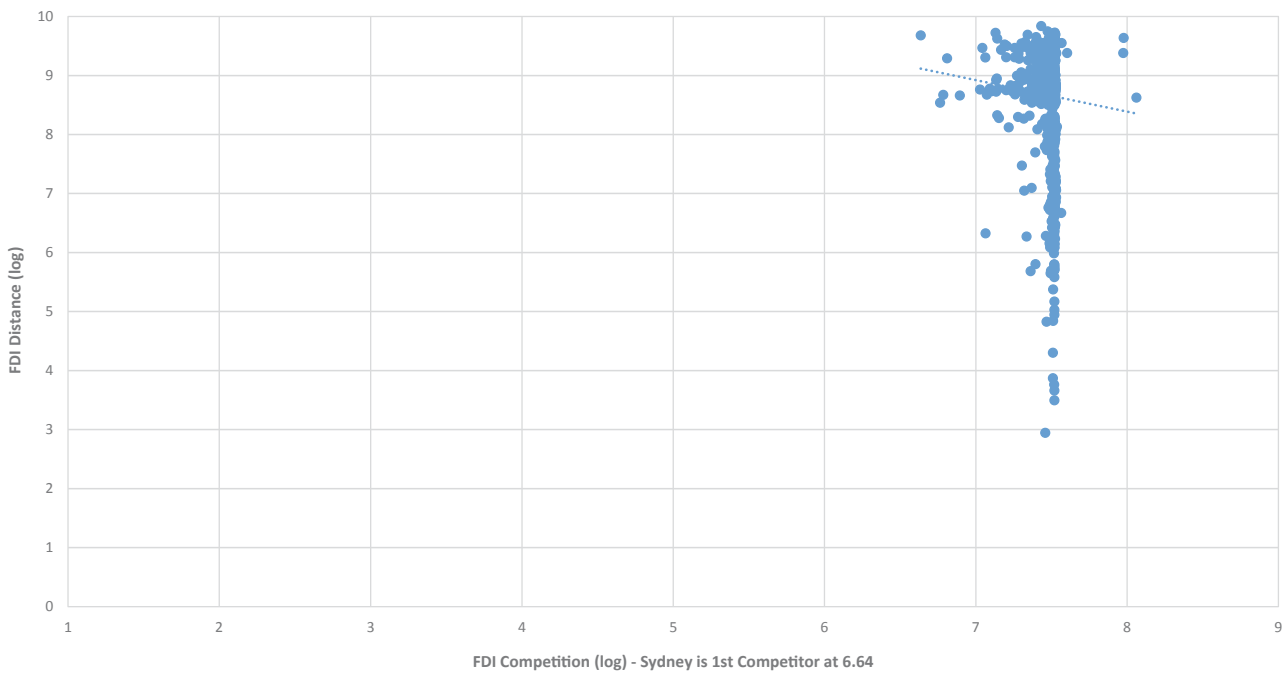
Figures 5.2 and 5.3 show the relationship between FDI Competition (on the x-axis) and FDI Distance (on the y-axis). FDI Distance has already been explained in section 3.5. FDI Competition is defined as the similarity of cities to each other in terms of FDI sectors.

Figure 5.2. City competition for FDI based on similarity of investment sectors (2003-2016)

Shanghai

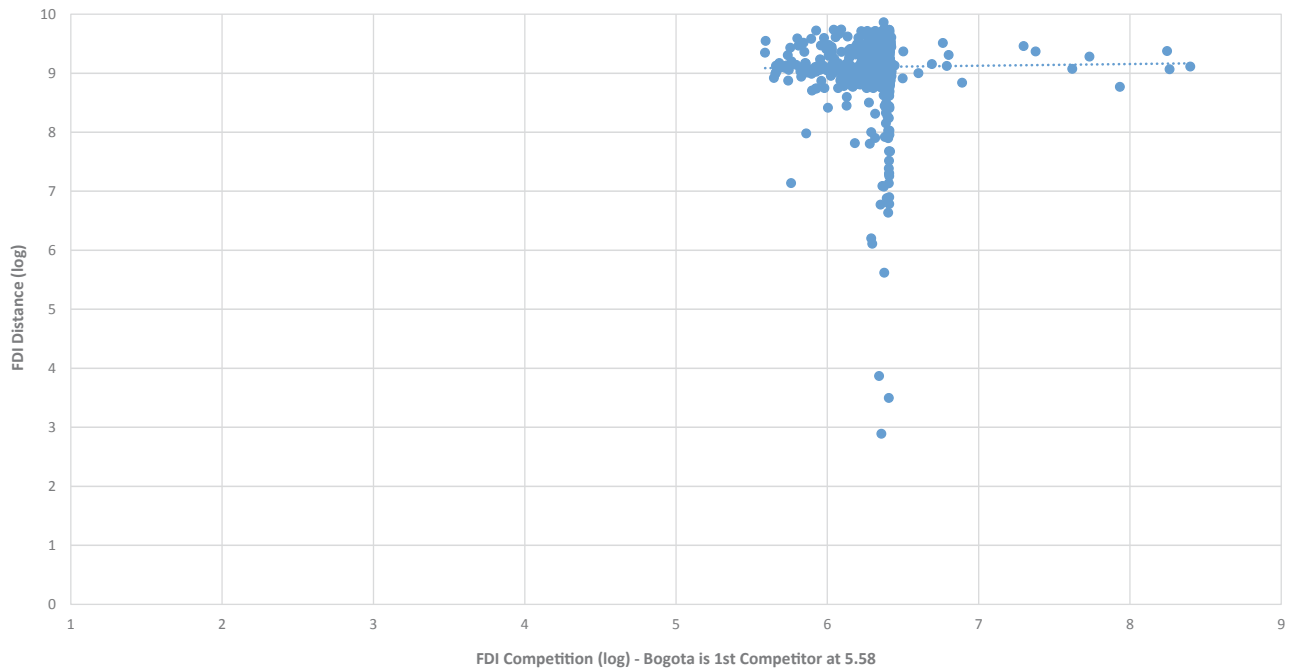


New York



Blue dots: world cities X-axis: FDI competition based on similarity of investment sectors Y-axis: the total distance of investments (km)
 Source: Wall, 2017. Based on fDi Markets data

Johannesburg



Blue dots: world cities X-axis: FDI competition based on similarity of investment sectors Y-axis: the total distance of investments (km)
Source: Wall, 2017. Based on fDi Markets data

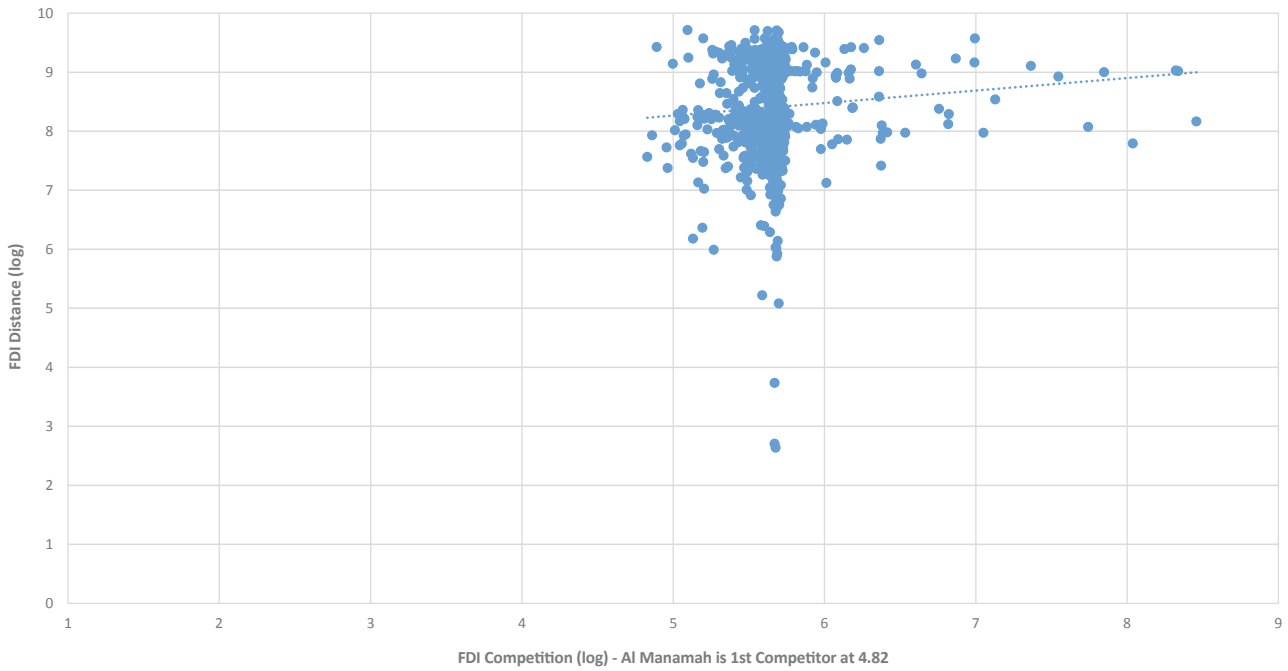


Smaller cities like Kigali have more competition for FDI because there are thousands of other cities with similar sectoral diversification and specialization profiles

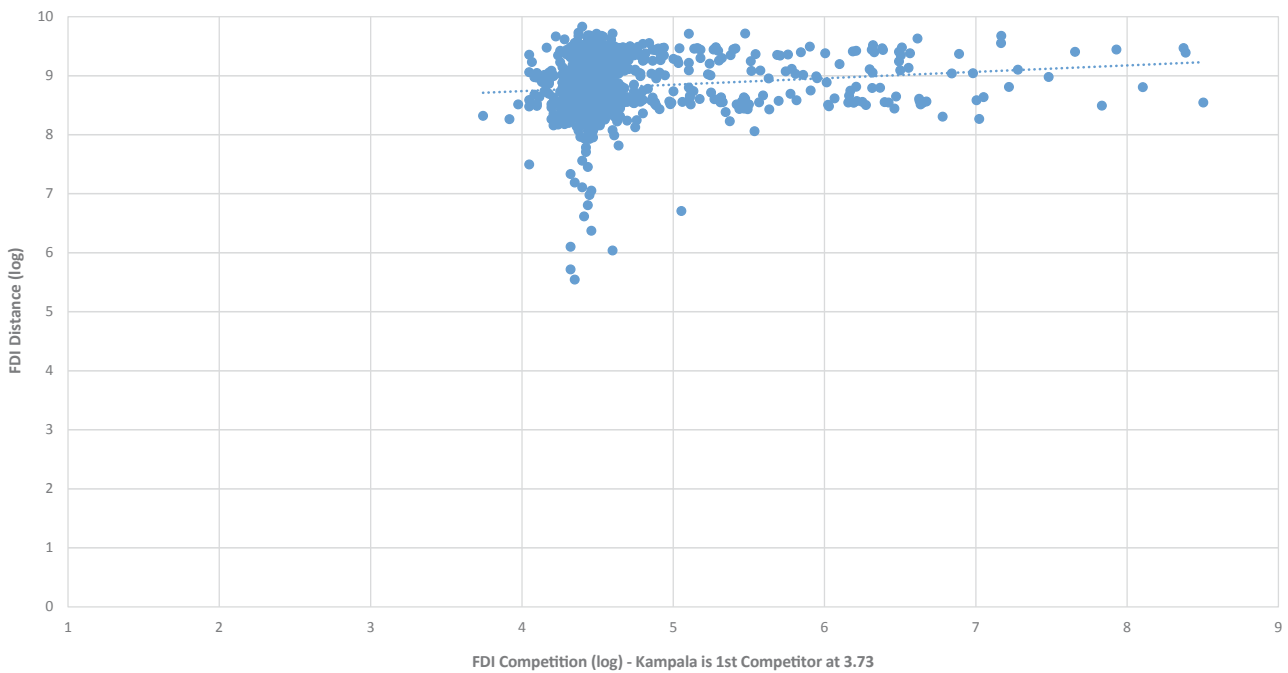
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Figure 5.3. City competition for FDI based on similarity of investment sectors (2003-2016)

Cairo

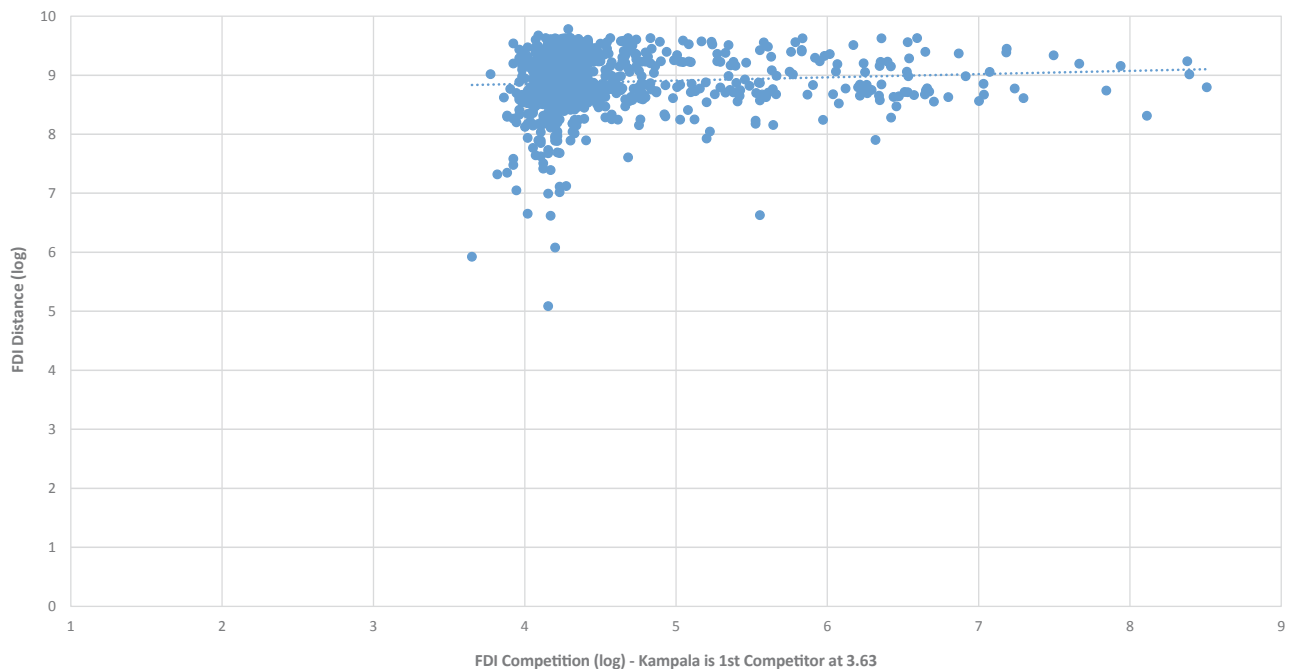


Abidjan



Blue dots: world cities X-axis: FDI competition based on similarity of investment sectors Y-axis: the total distance of investments (km)
 Source: Wall, 2017. Based on fDi Markets data

Kigali



Blue dots: world cities X-axis: FDI competition based on similarity of investment sectors Y-axis: the total distance of investments (km)
Source: Wall, 2017. Based on fDi Markets data

To prevent cities being outcompeted by a vast array of other cities, they need to diversify and/or specialize to face less competition and achieve higher economic prosperity and resilience

The closer cities (blue dots) are to the y-axis (left) the more they are under threat of competition. For example (see Figure 5.2), in the case of Shanghai (top graph) the cluster of global cities is found on the extreme right hand side of the graph and therefore very far from the y-axis. This shows that Shanghai is hardly threatened by other world cities because its FDI profile is so unique (highest sectoral diversity and specialization of FDI) that no other city can serve as a true substitute for it.

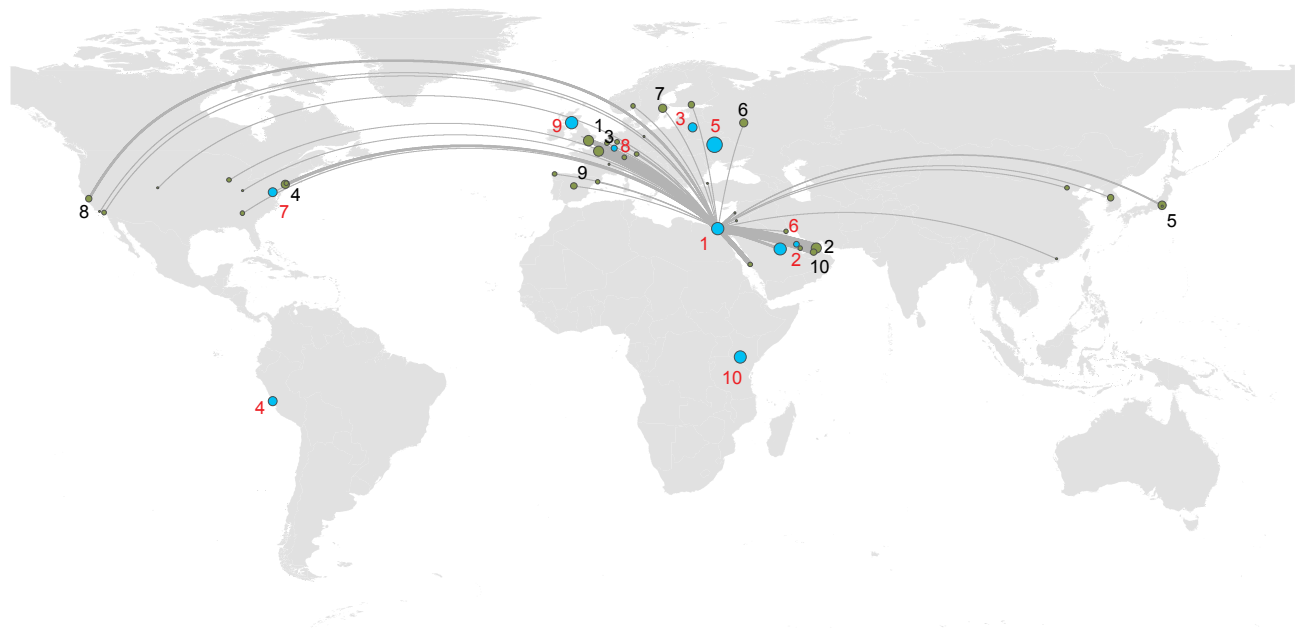
For New York (second graph, Figure 5.2) the cluster of blue cities lies closer to the y-axis because New York has several competitor cities that are equally interesting to investors. These cities have diversity and specialization profiles similar to those of New York

and can therefore act as substitutes of New York. For Johannesburg, (third graph, Figure 5.2) the cluster of cities is even closer to the y-axis and Johannesburg has many more competitors for FDI than Shanghai and New York because global investors have a far larger array of cities with similar characteristics to choose from. Cairo (first graph, Figure 5.3) has even more competitors than Johannesburg.

In the cases of Abidjan (second graph, Figure 5.3) and Kigali (third graph, Figure 5.3), most cities are even closer to the Y-axis. This means that they have comparatively the most competitors. This is because these smaller cities have thousands of other cities with similar sectoral diversification and specialization profiles and, consequently, global investors can choose out of a multitude of cities to access common markets as well as to get the required services and goods.

To prevent cities being outcompeted by a vast array of other cities, they need to diversify and/or specialize to face less competition and achieve higher economic prosperity and resilience. This finding confirms previous research (e.g. ESCAP, 2014) which showed that economic diversification is of critical importance to countries and cities to minimize economic vulnerability, increase GDP

Figure 5.4. The competitor cities of Cairo, Johannesburg, Abidjan and Kigali (2003-2016)

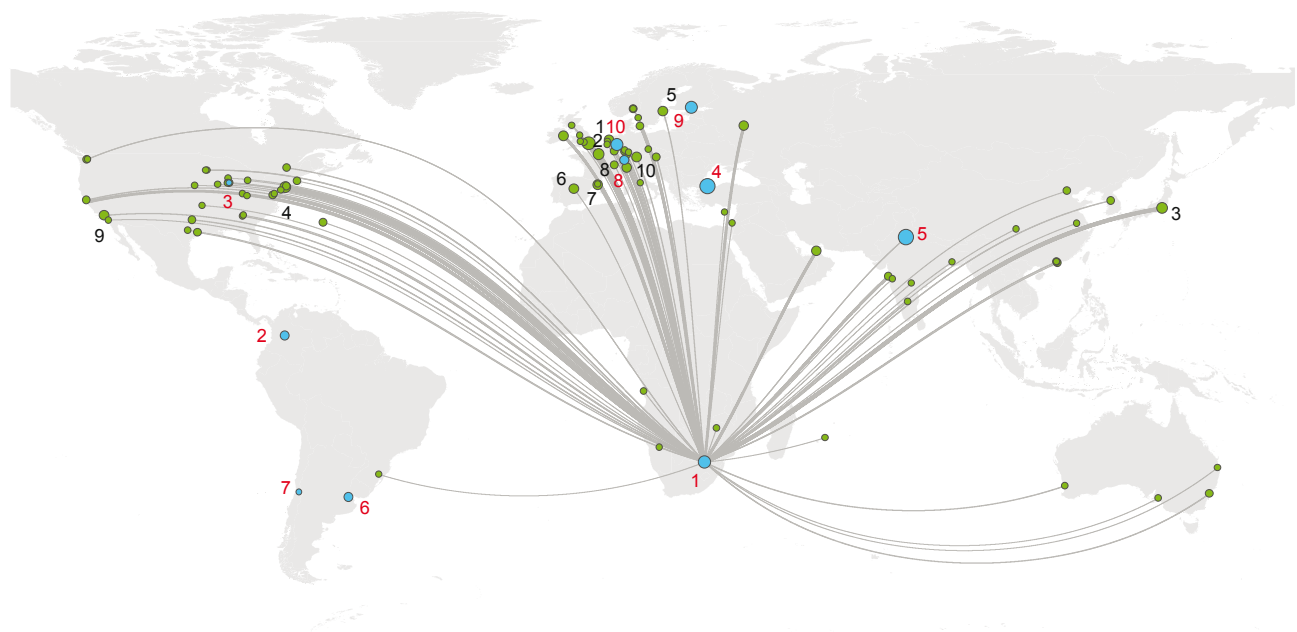


● FDI Source City

- 1. London
- 2. Dubai
- 3. Paris
- 4. New York
- 5. Tokyo
- 6. Moscow
- 7. Stockholm
- 8. San Jose
- 9. Madrid
- 10. Abu Dhabi

● Top Competitors of Cairo

- 1. Cairo
- 2. Al Manamah
- 3. Vilnius
- 4. Lima
- 5. Kiev
- 6. Riyadh
- 7. Washington
- 8. Luxembourg
- 9. Glasgow
- 10. Nairobi

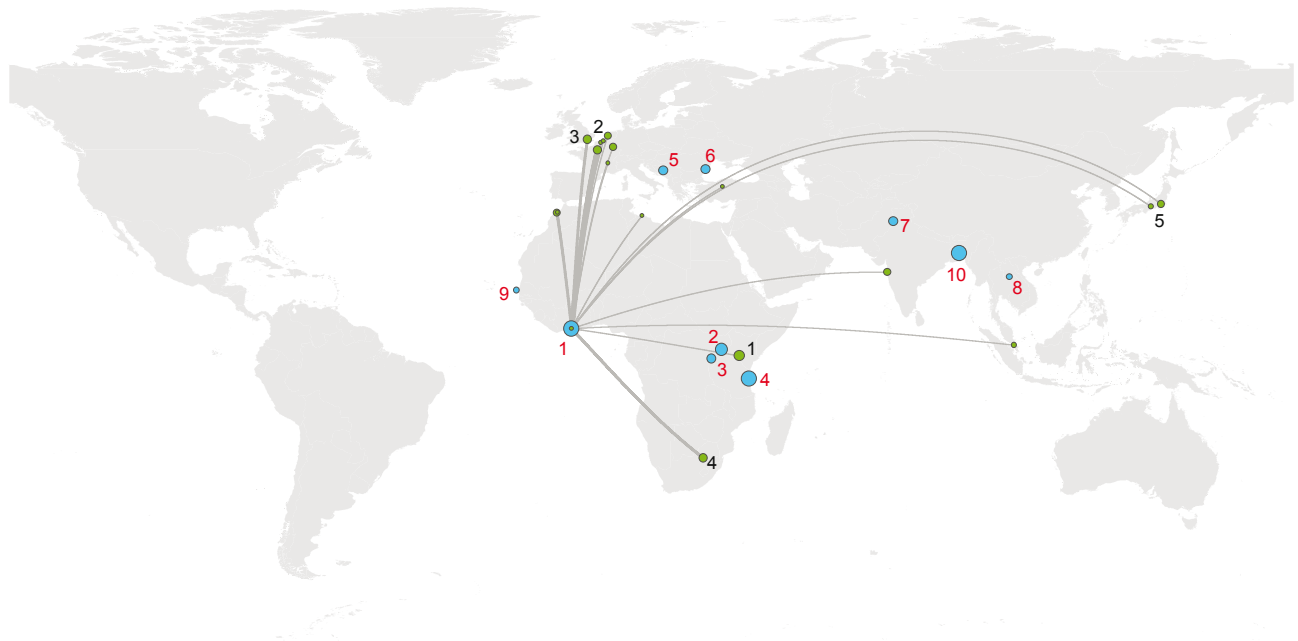


● FDI Source City

- 1. London
- 2. Paris
- 3. Tokyo
- 4. New York
- 5. Stockholm
- 6. Madrid
- 7. Barcelona
- 8. Munich
- 9. Los Angeles
- 10. Milan

● Top Competitors of Johannesburg

- 1. Johannesburg
- 2. Bogota
- 3. Chicago
- 4. Istanbul
- 5. Delhi
- 6. Buenos Aires
- 7. Santiago
- 8. Zurich
- 9. Helsinki
- 10. Dusseldorf

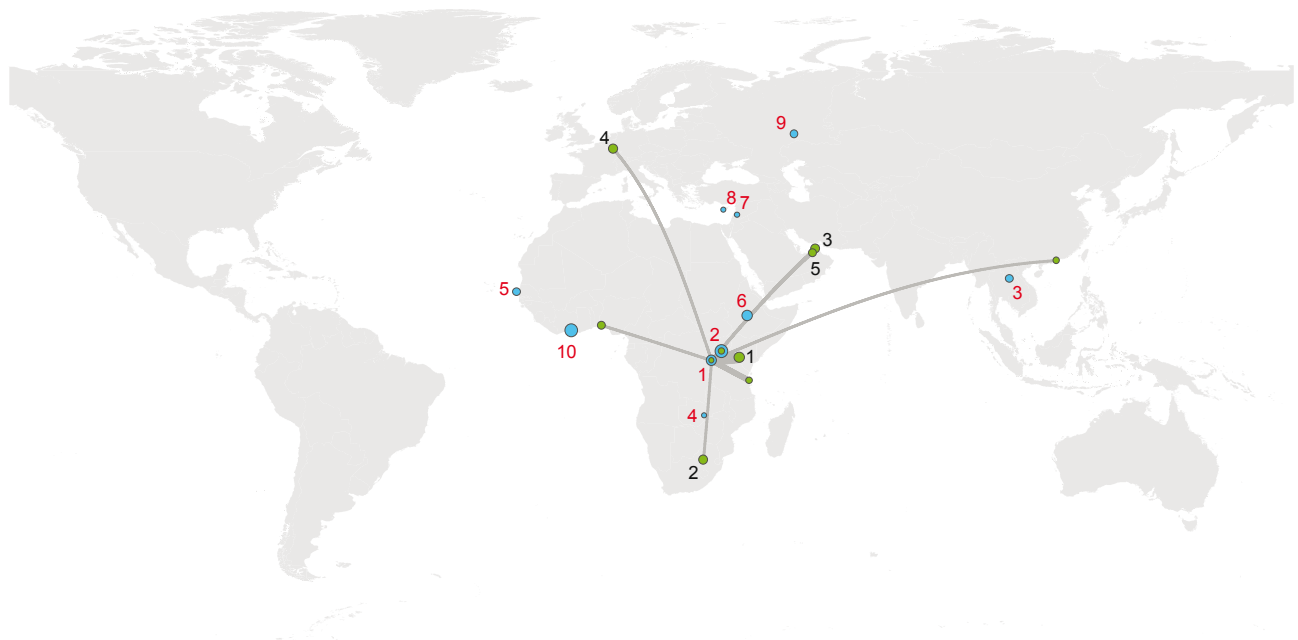


● FDI Source City

- 1. Nairobi
- 2. Paris
- 3. London
- 4. Johannesburg
- 5. Tokyo

● Top Competitors of Abidjan

- 1. Abidjan
- 2. Kampala
- 3. Kigali
- 4. Dar es Salaam
- 5. Sarajevo
- 6. Constanta
- 7. Lahore
- 8. Vientiane
- 9. Dakar
- 10. Dhaka



● FDI Source City

- 1. Nairobi
- 2. Johannesburg
- 3. Dubai
- 4. Luxembourg
- 5. Abu Dhabi

● Top Competitors of Kigali

- 1. Kigali
- 2. Kampala
- 3. Vientiane
- 4. Lusaka
- 5. Dakar
- 6. Addis Ababa
- 7. Damascus
- 8. Limassol
- 9. Samara
- 10. Abidjan

Source: Wall, 2017. Based on fDi Markets data

and ensure competitive advantages within product niches. Indeed, by improving product differentiation and sophistication while tapping export potential, countries and cities can achieve more sustainable development and growth paths.

Acknowledging that different places pursue alternative and often competing routes to diversification, this analysis has underscored the importance of understanding the unique competitiveness of each city so that precisely tailored strategic planning activities for these cities can be conceived. In the case of Abidjan, Cairo, Johannesburg and Kigali we have seen that they have different competitors. These competitors can be explored in detail in future to find out what social, economic, environmental and policy location factors determine the FDI attraction. Of these competitor cities, if for instance Cairo wishes to become more diversified in a sector in which it is not yet well developed (e.g. biotech), then it would have to identify those world cities

Acknowledging that different places pursue alternative and often competing routes to diversification, this analysis has underscored the importance of understanding the unique competitiveness of each city so that precisely tailored strategic planning activities for these cities can be conceived

that perform best in that sector and subsequently determine the most important location factors that attract this type of FDI into those cities. From this knowledge, Cairo would then be able to develop the policy and planning tools and interventions to better compete for such sectors of FDI. This is further discussed in section 7.3.



While New York (above) and Shanghai are both top-end global attractors of FDI, they are not actually strong competitors of each other as they have different sectoral investment profiles © Luciano Mortula

6. Determinants and impact of FDI into countries and cities



Women's participation in more advanced labour sectors in Asia has contributed to attracting FDI

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6.1. Location factors that attract FDI into Africa and Asia

According to Gomez et al. (2017), whatever the investment origin, effective policy should regulate the activities of foreign firms to avoid detrimental impacts and to create incentives for strengthening beneficial developments (see also Appendix 2). Similarly, investment promotion campaigns and branding strategies should accurately target the types of investors that can be expected to support sustainable development at the investment-receiving end.

We conducted quantitative research on the factors contributing to the attraction of investments in African and Asian countries using various statistical

methods. The data was obtained from the *Financial Times* (FDI Markets and Analyse Africa), the World Bank and the Global Competitiveness Index of The World Economic Forum.

Table 6.1 shows the statistical results of the determinants of FDI into Africa. Model 1 (column 2) lists indicators which, together, explain to a large degree the attraction of investment into the continent. Firstly, we note that women's participation in the formal labour force bears no significance on FDI attraction in Africa, unlike Asia (see Table 6.2) where this indicator reveals a highly significant and positive effect on attracting FDI. It is important to note that this specifically reflects

women working in the formal (especially secondary and tertiary) economic sectors. Therefore, these results should not be confused with the general understanding that there is a high participation of African women in the agricultural and informal sectors. The results for Africa show that the participation of women in the high-end sectors is not sufficient to bear any significance to attracting FDI.

Furthermore, in the 1980s and early 1990s, labour force growth was substantially higher for women than for men for every region of the world except Africa. In the industrialized advanced economies, increasing female labour force participation has been linked to the completion of the fertility transition (Lim, 2002). The combined impact of rising female education and declining fertility rates is said to explain the participation of women in labour markets over the past 25 years in Asia, (ADB, 2016). This will be much like the case of Asia, where women's participation has increasingly occupied more advanced labour sectors, and therefore contributes to attracting FDI. Much has to be done in Africa to increase women's empowerment in these sectors e.g. promoting a supportive environment, increasing market access and competitiveness, improving skills and technologies, and securing rights (WIEGO, 2008).

The statistical results imply that there are too few women working in these sectors to have any significant impact on investors' considerations. This does not mean that women's participation in the overall workforce of Africa is low. In fact, sub-Saharan Africa has one of the highest rates (around 60%) of women's labour force participation in the world. However, as said earlier, women's participation is overrepresented in the informal and agricultural sector, which is characterized by poor wages and insecure working conditions (ILO, 2002). For these reasons, the contribution of African women to attracting investment FDI is not statistically significant. Nonetheless, the trend is positive (see Table 6.1) and once the participation of women in the African formal labour sector increases in future, this will expectedly become significant and have a positive effect on attracting investment.

Next, we see in Table 6.1 that domestic market size has a strong positive impact on attracting FDI into Africa. This is in line with a study by Gomez et al. (2017) which shows that market size, market efficiency, local technological capabilities and financial infrastructure are essential factors in attracting FDI into the Global

South (see also Appendix 2). This finding is further confirmed and elaborated in the Knowledge FDI chapter (Part B of the online report). In development studies, market size (measured by either GDP or GDP per capita) is commonly considered to be the most important FDI determinant (Artige and Nicolini, 2005).

In the 1980s and early 1990s, labour force growth was substantially higher for women than for men for every region of the world except Africa

Hence, FDI will locate in countries with large and expanding markets with greater purchasing power and where firms are likely to obtain a higher return on capital and investment profit. A large market allows for more efficient utilization of resources and economies of scale. The greater the host country's regional or urban total income and future development potential, the more FDI it will attract (Billington, 1999). Market size is also known to stimulate industrial specialization and is conducive to creating considerably larger incentives for creativity and producing new ideas. A single idea can also be more profitably sold in larger markets. Similarly, larger urban markets positively stimulate the accumulation of human capital and transmission of knowledge.

The next indicator of importance to FDI attraction in Table 6.1 is trustworthiness. Various studies have shown that societies with well-developed norms of trustworthiness and the rule of law experience better economic growth, have stronger civic stability, and more effective public institutions. In addition, institutional arrangement for national, urban and industrial policies should match the structure of the institutions to ensure effective coordination between policy goals, institutional objectives and capacities (UNECA, 2017b). Foreign investors are deterred by deficient governance and lack of enforcement of property rights, unaccountability of legal and financial services, and lack of commitment and enforcement by governments (at all levels) to stand as guarantor to foreign investors.

In a similar context, the corruption indicator is shown to have a significant and negative impact on FDI attraction. It is a common perception, based on

Table 6.1.
The determinants of FDI in Africa

Variables	Model 1 Total FDI	Model 2 Total FDI
Women's participation in formal labour force	0+	0+
Domestic market size	++	++
Trustworthiness	+++	+++
Corruption	-	-
Available domestic credit	+++	+++
Semi-presidential system		---
Parliamentary system (prime minister)		--

**Governance System reference point is the Full Presidential System
Source: Wall and Nyamai, 2017, based on fDi Markets and World Bank data

Table 6.2.
The determinants of FDI in Asia

Variables	Model 1 Total FDI
Women's participation in formal labour force	+++
Technological adaptation	+
Domestic market size	++
Visa freedom	++
Health	+
Land area	+++
Coastal area ratio	+++
Domestic credit	+++

Source: Wall and Nyamai, 2017, based on fDi Markets and World Bank data

+++ Very significant and positive relation
++ More significant and positive relation
+ Significant and positive relation
--- Very significant and negative relation
-- More significant and negative relation
- Significant and negative relation
0+ Not significant but positive relation
0- Not significant but negative relation

many studies, that numerous Sub-Saharan economies have serious corruption problems. Based on the Corruption Perceptions Index, a widely utilized measure of corruption risk in emerging markets, it has been shown that 90 percent of Sub-Saharan Africa is perceived to have entrenched corruption, albeit that the level of corruption varies from country to country. This impediment needs to be seriously tackled, difficult as that may be, as it reduces a country's efficiency and institutional environment quality which, in turn, impacts its competitiveness for foreign investment.

Table 6.1 further shows that availability of domestic credit is highly significant and positive to attracting FDI. Access to various forms of funding and finance are essential pre-requisites for investment. It is perhaps not surprising that among the developing regions, East Asia has the most advanced credit system with the highest investment-to-GDP ratios (UNCTAD Trade and Investment Report, 2016). Large-scale efforts are required to build effective banking and financial systems continent-wide, capable of providing adequate credit and liquidity for rapid productive expansion.

The chapter on knowledge FDI, in Part B of the online version of the report, also finds that financial market development has a significant impact on inward FDI, specifically in the knowledge-based sector. Proactive policy measures are paramount to overcome

Large-scale efforts are required to build effective banking and financial systems continent-wide, capable of providing adequate credit and liquidity for rapid productive expansion

early hurdles to viable and profitable private sector initiatives and to channel these into projects that play a major role in structural transformation. Alfaro et al. (2004) argue that the lack of development of local financial markets can also limit the economy's ability to take advantage of potential FDI spill-overs. Additionally, Azman-Saini et al. (2010) showed that the impact of FDI on growth, kicks in only after local financial development exceeds a certain threshold level. Until then, the benefits of FDI are non-existent.

Governments should therefore emphasize the diffusion aspect in formulating FDI policies that promote financial market development. African countries should also strengthen their tax systems and expand their tax base along with financial market development to increase investment flows (African Development Bank Group, 2017). A World Bank study also revealed that the current taxation system in Nigeria, for instance, contains a number of 'nuisance taxes' and double taxes on the mobility of people and goods across states. About 31 per cent of pre-tax profit is paid in tax by firms. In addition, high tariffs

and non-tariff levies and charges increase the cost of importing (The World Bank, 2011)

Table 6.1 shows the impact of presidential systems of government in Africa and their influence on attracting FDI. The higher the level of democratic sophistication, i.e. a full-presidential system (reference point), the higher the FDI attraction. Furthermore, countries that have a parliamentary system of governance or semi-presidential system, tend to attract less FDI (see table). In short, the more democratically progressive governments are, the more willing investors are to locate there.

Similar analysis was done on Asia (Table 6.2) and a different set of indicators proved to be important for this region, which can shed light on aspects which Africa can take into account in future. Due to space constraints

these will not be discussed in detail here but briefly mentioned as possible beacons for future development.

As discussed previously, women's participation in the formal labour force is vital to foreign investment in Asia. So is domestic credit availability, as previously discussed for Africa. Technological adaptation is also essential in Asia. Technology absorption concerns the acquisition, development, assimilation and exploitation of technological knowledge and products by local firms from external sources, e.g. multinationals. This means that education levels in countries and cities need to gear students to upcoming technologies so that they will be able to collaborate with or can be employed by international firms and be equipped to absorb the technologies they provide. If not, the local workforce

Table 6.3.
The motives of firms to invest globally, in Europe or in Africa

Global Motive of Firms	FDI Projects	% of Projects	Companies	% of Companies
Domestic market growth potential	14,926	40.7	9,482	43.6
Proximity to markets or customers	12,837	35.0	9,257	42.5
Skilled workforce availability	6,528	17.8	4,853	22.3
Regulations or business climate	5,240	14.3	4,158	19.1
Infrastructure and logistics	3,207	8.7	2,662	12.2
Industry cluster / critical mass	2,666	7.2	2,380	10.9
Lower costs	1,770	4.8	1,542	7.0
IPA or government support	1,713	4.6	1,502	6.9
Attractiveness / quality of life	1,521	4.1	1,357	6.2
Technology or innovation	1,225	3.3	1,081	4.9
Other motive	4,519	12.3	3,706	17.0

European Motive of Firms	FDI Projects	% of Projects	Companies	% of Companies
Proximity to markets or customers	2,692	40.0	2,316	44.7
Domestic market growth potential	1,957	29.0	1,586	30.6
Skilled workforce availability	1,306	19.4	1,107	21.3
Regulations or business climate	827	12.2	747	14.4
Infrastructure and logistics	777	11.5	693	13.3
Industry cluster / critical mass	690	10.2	658	12.7
IPA or government support	450	6.6	416	8.0
Technology or innovation	384	5.7	355	6.8
Attractiveness / quality of life	375	5.5	343	6.6
Universities or researchers	238	3.5	226	4.3
Other motive	918	13.6	836	16.1

Table 6.3. (Continued)
The motives of firms to invest globally, in Europe or in Africa

African Motive of Firms	FDI Projects	% of Projects	Companies	% of Companies
Domestic market growth potential	694	52.2	542	53.6
Proximity to markets or customers	413	31.1	342	33.8
Regulations or business climate	317	23.8	263	26.0
Skilled workforce availability	91	6.8	80	7.9
Infrastructure and logistics	70	5.2	66	6.5
Natural resources	64	4.8	53	5.2
Lower costs	58	4.3	56	5.5
Industry cluster / critical mass	43	3.2	43	4.2
IPA or government support	36	2.7	34	3.3
Attractiveness / quality of life	30	2.2	27	2.6
Other motive	104	7.8	97	9.5

African Market Served	FDI Projects	% of Projects	Companies	% of Companies
Domestic	2,049	53.7	1,274	52.2
Regional	1,702	44.6	1,332	54.6
Sub-regional	40	1.0	39	1.6
Global	29	0.7	29	1.1

European Market Served	FDI Projects	% of Projects	Companies	% of Companies
Regional	8,051	45.7	6,644	54.3
Domestic	6,633	37.6	4,562	37.3
Sub-regional	2,198	12.4	1,903	15.5
Global	891	5.0	783	6.4

Source: Wall 2017, based on fDi Markets data

will be subjected to lower grade occupations and not be able to benefit from innovations.

Domestic market size is key to attracting FDI in Asia and, for reasons previously explained, also for Africa. Following this, Table 6.2 further shows that Asia's visa freedom has contributed to positive investment developments. This finding might be of interest to African states, who more often than not impose harsh visa restrictions on travellers from some foreign countries and even other African countries. Such restrictions can deter foreign visitors and undermine regional integration efforts amongst African countries. Neumayer (2010) concludes that such restrictions reduce the flow of tourists, business people and other travellers, and damage the tourism industry as well as reducing trade and scientific, cultural and other exchanges with foreign countries.

6.2. Companies' motives to invest in different geographic regions

Unlike the previous section which was based on econometric analysis, Table 6.3 depicts survey results based on thousands of firms and illustrates their priorities to invest in particular locations. The most important reason for firms investing globally is domestic market growth potential (43.6% of the 9,482 firms surveyed). This means cities and urban regions, e.g. Gauteng, with high urbanization levels but especially those with growing middle classes and high (future) spending potential. Next, we see that proximity to markets or customers is essential. This means large cities and particularly those that are proximate to other cities in the greater urban or metropolitan region and which have high infrastructural connectivity (road, rail, airports, ports and IT) within and between cities.

As shown in Table 6.3, these two indicators are equally important for firms investing in Africa. For European investors, a second important aspect is proximity to markets or customers. Firms enjoy highly connected and accessible infrastructural networks, as in Europe, that give rapid and easy access to thousands of cities and towns. This means that African cities should better integrate with other proximate cities by means of infrastructural network integration. For global and West European investors, a skilled workforce is the third most important motive. This implies that African national and local policymakers need to bolster secondary and tertiary education programmes, facilitate the competitiveness of their universities, and promote stronger R&D to attract investors.

For investors in Africa (see third section of Table 6.3), when compared to the priorities of global investors (see first section of Table 6.3), we see that for both domestic market growth potential is the key factor. This shows that Africa is urbanizing fast and that there are high expectations of future growth in these markets.

Proximity to markets serves as the second most important motive for global and African investors. It shows that many multinationals in Africa have become less oriented towards export production and are now focusing on selling their products directly to local and regional markets

Proximity to markets serves as the second most important motive for global and African investors. It shows that many multinationals in Africa have become less oriented towards export production, and are now focusing on selling their products directly to local and regional markets. Similar to the first motive, it also reveals that African cities are rapidly transforming into large urban regions with a variety of proximate markets



African governments need to ensure that the quality of universities is vastly improved and that education curricula are matched with growing regional and global demand sectors

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Table 6.4.
Impact on GNI per capita in Africa of different FDI sectors and other indicators

Variables	GNI per capita	GNI per capita	GNI per capita	GNI per capita	GNI per capita
Total FDI	+++				
Hitech FDI		++			
Manufacturing FDI			+++		
Resource FDI				0-	
Services FDI					+++
Urban Population	+++	+++	+++	+++	+++
East Africa Community (EAC)	---	---	--	---	---
Southern Africa Development Community (SADC)	---	-	---	---	---
Economic Community of West African States (ECOWAS)	---	---	---	---	---
Intergovernmental Authority on Development (IGAD)	--	--	-	---	--
Community of Central African States (CEN-SAD)	---	---	---	---	---

Source: Wall and Nyamai, 2017, based on fDi Markets and World Bank data

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation

that are increasingly of interest to multinationals. The third most important motive for investors in Africa is the need for regulations and business climate (26% of 263 investors into Africa stated this), underlining that firms seek trustworthy and reliable countries and cities with supportive business and legal ecologies. For Africa, which suffers from high corruption and crime, this reason is very important to investors. This is a less important motive for Europe (14.4%), and globally (19.1%). It is therefore extremely important for national, provincial and municipal governments to forge a healthy business climate and provide investors with confidence for investing in these locations.

Unlike global motives, which place a skilled workforce as the third most important objective, investors in Africa place a skilled workforce as the fourth motive to invest in Africa, (supported by only 7.9% of the 80 firms surveyed). This shows that these firms are generally not interested in Africa for skills, simply because this is not yet adequately available. However, a skilled workforce is key to lifting African citizens out of poverty and therefore African governments should take heed of this and ensure that the education levels and quality of universities are vastly improved, that education curricula are matched with growing regional and global demand sectors, and that they provide the type of skilled workforce required to make African cities regionally and

globally competitive. Skilled local employees can be better absorbed into a multinational's workforce and stimulate local production and innovation.

Infrastructure and logistics forms the fifth motive for African investors (6.5%). In Europe (13.3%) and globally (12.2%) this is roughly twice as important to investors. Therefore, if African cities improve their infrastructure and logistics networks, FDI can be expected to increase. The sixth-ranking motive in terms of importance for Africa investors is natural resources (5.2%). African firms investing in Africa have become generally less interested in raw materials. This is likely due to the sharp fall of commodity prices in the 2003-2016 period, but also the strong rise of knowledge-intensive manufacturing, services and hi-tech industries. This indicates that African governments should now focus more on the non-resource sectors that tend to create more jobs, higher incomes, and can help reduce poverty and economic inequality. It also means that African governments should put more effort into making cities less consumer dependent and instead boost innovation and productivity of goods, services and information.

For global and European investors, the results show that natural resources is not even within their top ten list of reasons for investment. Next, we see that lower costs is the seventh reason for investing in Africa. It is therefore not a very important motive.

This is verified in the chapter on wage distribution across African cities and its effect on FDI attraction (see part B of the online version of the report), which shows that this is not a significant operational cost for multinationals. It means that most labour generated by multinationals is relatively minimal, poorly paid and, most importantly, that there is little wage variation across the continent. It suggests that minimum wages and wage differences should be stringently negotiated and formalized at continental, national and municipal levels of African governance, so as to avoid further conscious or subconscious exploitation.

The eighth most important motive for investors in Africa is critical mass of industry clusters. For global and European investors this is the sixth most important motive. It means that foreign investors seek proximity to a high density of local affiliates and suppliers in the same and related sectors. For Africa that is not a priority motive (only 4.2% of surveyed firms found this important), implying

Investment Promotion Agencies (IPAs) or government support are much more important to European and global investors, than African ones. If African policymakers improved their IPAs and the healthy business environments that this entails, then FDI into Africa would expectedly rise

that international firms operating in Africa do not depend much on local business, which is a problem. Therefore, policymakers need to put more effort into improving the quantity and quality of local firm clusters (e.g. specialized industrial parks) in sectors they already have potential in, as well as for new sectors that have high regional and global growth prospects. Once a critical mass of local firms in these sectors is established, this will positively influence the way foreign firms cooperate with African businesses.

Investment Promotion Agencies (IPAs) or government support are much more important to European and global investors, than African ones (ninth motive). If African policymakers improved their IPAs and the healthy business environments that this

entails, then FDI into Africa would expectedly rise. The tenth motive in Africa is the attractiveness of cities and quality of life (2.6%). Compared to Europe and globally, this is a far weaker incentive for African investors. Here too, we can expect that improvement in the attractiveness and quality of life in African cities, will strongly improve the quantity and especially the quality of FDI into Africa. Advanced manufacturing and services, as well as knowledge-intensive industries seek highly attractive cities to operate in. Cities like Kigali, Cape Town and Casablanca already prove this, as they particularly attract this kind of high-end investment.

6.3. The impact of FDI on Africa and Asia

In the next section, we explore the impact of FDI on economic development in Africa, i.e. on GNI per capita. GNI per capita is defined by the World Bank as the US dollar value of a country's final income in a year divided by its population number. It reflects the average income of a country's citizens. While GDP is the commonly used measure of economic growth, our research used GNI/capita to measure a country's economic output per person which better represents the distribution of capital across the nation's people. Furthermore, for our analysis, FDI has been disaggregated into sectors i.e. manufacturing, hi-tech, resources and services. We found that all FDI sectors showed a significant and positive effect on GNI per capita, except for the resources sector where impact proved to be insignificant. While trade in resources seems logical for a continent that has an abundance of raw materials, the benefits in terms of socio-economic development and sustainable economic growth appear suboptimal.

Following these findings, African governments should take fundamental decisions on investments that are most likely to foster economic growth, particularly in the hi-tech, manufacturing and services sectors. Services also account for a large portion of Africa's stock of inward FDI, although the share is lower than in other regions and concentrated in a relatively small number of countries. But it should be realized that FDI in services can be important in supporting the participation of African economies in global value chains. The services and manufacturing sectors have contributed significantly to the GNI per capita growth both in Africa and Asia given the number of jobs created by these two sectors.

The research results in Table 6.4 suggest that the hi-tech sector has contributed significantly to

economic growth in Africa. Research has shown that technological progress of most low-income countries is mainly a process of adoption and adaptation of technologies from abroad rather than the creation of new technologies. However, a 2014 World Bank and an Elsevier report revealed that yearly research output in Sub-Saharan Africa (SSA) regions increased from 0.44% to 0.72% within the period 2003-2012. Although this is a positive development, it accounts for less than one percent of the world's research output. The same reports indicate that Asian countries with comparable levels of research output as Africa, such as Malaysia and Vietnam, have grown much faster over the same period. This shows that much has to be done to get this sector globally competitive.

There are several reasons for this, for example, a recent report by Quartz Africa Brief indicated that Africa's lagging in research and innovation emanates from low-quality educational curricula and global funding skewed towards health and agricultural development rather than science, technology, mathematics and engineering projects.

Technological progress is critical to economic growth and welfare for any country, regardless of its level of development. Given the rapid technological change in the advanced economies of the world, closing Africa's technological capability gap by e.g. attracting more FDI is a necessary condition to put African nations on a path of sustainable development and poverty reduction. Policies on promoting scientific research and innovation in Africa should in particular aim at correcting the systemic weaknesses that hamper knowledge acquisition and dissemination in Africa (Aziz, 2012). A new African effort to espouse a culture of innovation would also help tackle problematic urbanization matters such as future urban food security, transportation/mobility and poverty reduction.

The analysis results (Table 6.4) further show regional differences within the continent. The Arab-Maghreb Union (AMU) was used as a reference point to identify the impact of total FDI and particular FDI sectors on the growth of African economies. The results reveal a significant negative impact on economic growth if AMU would hold the same characteristics as the other economic blocs in the continent. It is shown that, in the case of AMU, the impact of various sectors of FDI on GNI per capita is better than in the remainder of Africa. Similarly, the 2015 UN Investment Report showed that FDI growth in the services and manufacturing sectors was much higher in Northern Africa.



Knowledge-intensive industries seek highly attractive cities to operate in such as Cape Town



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7. Social, environmental and economic determinants of FDI clusters in Johannesburg



The Central Business District, Johannesburg

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7.1. The geography of FDI in Johannesburg

In this final section of Part A, the FDI clusters in the districts of Johannesburg have been mapped at the postcode level for various years, then aggregated to the seven urban regions of Johannesburg (regions A-G), as seen in the map of Figure 7.1. Next, this panel data was matched with

local social, environmental and economic data for these same municipal regions. This data was then used for statistical modelling, to test the effect of these urban factors upon FDI attraction into Johannesburg's districts.

Firstly, we see that FDI clusters (red nodes) are found particularly in the affluent regions of

Johannesburg's northern suburbs e.g. Sandton and Rosebank (dark blue regions). It is also seen that regions D and G, which include the poorer areas in the south (e.g. Soweto) receive no FDI. The uneven distribution of FDI seen at the global and regional scales, appears to be found at the city level too. The yellow dots in the map show the locations of local firms, which are evidently more homogeneously scattered across the city than is the case of FDI companies which are clustered along the major highways in a South-North direction. Next, it is of interest to explore the determinants of these urban FDI regions. In other words, which social and economic location factors best explain investment clustering.

7.2. FDI attraction in Johannesburg's seven major districts

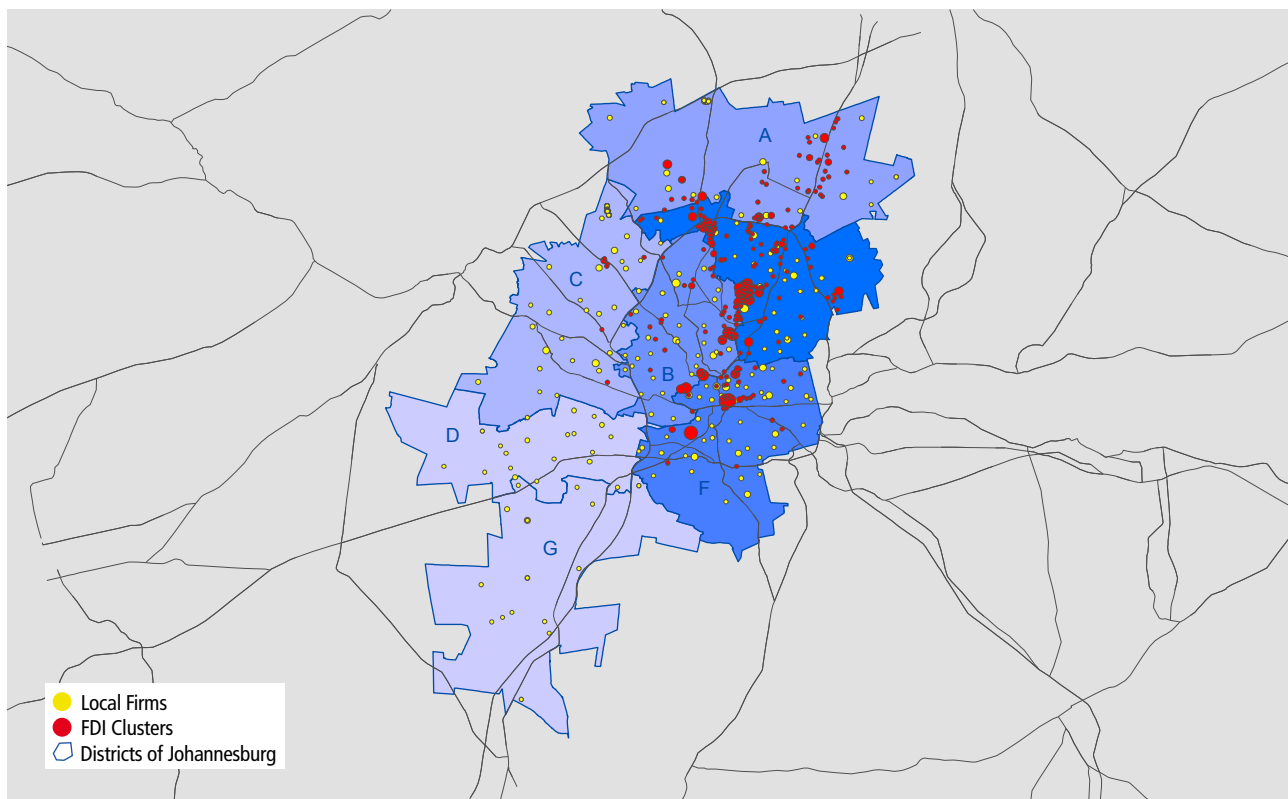
In this study it was found that FDI has been increasing since 2004 in the Midrand district area, the districts of Randburg and Rosebank, and the Sandton

In this study it was found that FDI has been increasing since 2004 in the Midrand district area, the districts of Randburg and Rosebank, and the Sandton district

district. Overall FDI into these regions has remained relatively stable. The Sandton district has been the largest receiver of FDI (see Table 7.1). In Table 7.1, several models have been tested on FDI. The models are represented by columns 2-6. Model 1 is column 2, and so forth.

The first model considers the effect of district population characteristics on FDI. The total number of residents in the district holding a postgraduate degree is used as a proxy for educational attainment. The number of residents holding a postgraduate degree has been increasing for all districts since 2004, with the Sandton and Alexandra district

Figure 7.1. The distribution of FDI and local firms in Johannesburg



Source: Wall, 2017, based on fDi Markets data and GIS shape-file maps (courtesy of the City of Johannesburg municipality)

Table 7.1.
The determinants of FDI clusters in Johannesburg's districts (2003 - 2016)

Variables	General Indicators for FDI	GVA Sector Indicators for FDI	Trade Indicators for FDI	Employment Indicators for FDI	Combined Indicators for FDI
Size of the urban region	0+	0-	0+		
Postgraduate education (log)	+				
Tourism (log)	+++				0+
Gross value added real-estate (log)		+++			
Gross value added electronics (log)		0-			
Export trade to Africa (log)			0+		+
Export trade to the Atlantic zone (log)			0+		
Export trade to Central America (log)			0+		
Total population (log)				0-	0+
Employment in agriculture (log)				---	0+
Employment in finance (log)				+++	
Employment in mining (log)				---	---

Source: Wall and Rutten 2017, based on fDi Markets data and IHS Global Insights data (courtesy South African head-office)

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation

having the highest growth. GDP is included as a proxy for economic growth, and has been rising in all districts, although growth in Midrand and Diepsloot has been significantly lower than in other districts. The Human Development Index (HDI) is a summary measure of the achievement in different dimensions of human development, such as life expectancy and standard of living. Tourism in all districts has been steeply increasing since 2008. The Sandton district has the highest number of tourists visiting the area. The size of the district is included as a control for spatial magnitude.

The second model considers the relationship between economic sectors on FDI. The following sectors are considered: real estate, electronics, finance, hotels, trade and retail trade. Gross value added by region is used as a proxy for the economic activity of each sector. Production in all sectors has been growing since 2004, while the district of Sandton and Alexandra, the inner city and Southern Johannesburg reveal the highest production levels. The size of the district is included as a control.

The third model estimates the relationship between local trade flows and the level of FDI. The value of trade exports to different geographic regions is used. Exports to Africa, Europe, North America and Central America are included in the analysis. All districts have

increasingly exported to the African region. Imports, as a percentage of GDP, were also included.

The fourth model explores the relationship between local labour market composition and FDI. The employment sectors included are agriculture, finance and mining.

The final model combines all significant variables that were found in the previous models into one combined model. For this, the following variables are included: gross value added of the real estate sector, exports to the African regions, and employment in the agricultural and mining sectors. The district total population is included as a control.

The following variables are found to have a significant positive relationship with FDI across Johannesburg's regions (see Table 7.1): (1) the number of postgraduates; (2) the number of tourists; (3) the gross value added of the real estate sector; (4) exports to the African region; and (5) employment in the financial sector. This again show the importance of developing an advanced local skill base, making cities attractive destinations for business and leisure tourists, high-quality built environments, Johannesburg's role in African regional trade, and the availability of sufficient capital. Employment in the mining and agricultural sectors is also seen to have a significant but negative relationship with FDI

in the city. This implies that FDI into Johannesburg is more geared towards secondary and tertiary sectors, a trend seen across the entire continent.

In the final model, exports to the African region again show a very significant positive relationship with Johannesburg's FDI, while employment in the mining sector recorded a negative relationship with the FDI over the study period. In this final model, the other variables no longer appear to have a significant relationship with FDI. The final model accounts for 55% of the variation across regions and time. These results suggest that FDI tends to occur in city districts with higher skilled local labour markets, a greater number of firms engaged in international trade, a productive real estate sector, high levels of employment in the financial sector, and a greater number of tourists. In addition to this, Kollamparambil and Jooee (2018), in their case study of Johannesburg in Part C of the report, identified several locational factors and government policies which make Johannesburg a major FDI destination in Africa.

7.3. Potential future FDI sectors for Johannesburg

Sustainable and inclusive urban development increasingly hinges on governments and municipalities making the right choices. This also applies to attracting the right kind of FDI. In the case of Johannesburg, the choice criteria can be based on benchmarks such as previous capital expenditure attracted to the city in different industrial sectors, the number of jobs generated by FDI in these sectors or a combination of both—as seen in the scatterplot of Figure 7.2.

In this case, communications brought the most capital to the city over the period 2003-2016 and created a reasonable amount of jobs. On the other hand, the metals sector has enabled the highest volume of direct employment, while attracting the third-highest capital expenditure. The software and IT services sector scored a good middle ground position and would also be a fair option for policymakers to choose. To a lesser degree, financial services, business services, hotels and tourism and transportation are also interesting candidates of future FDI attraction to Johannesburg.

Besides choosing sectors in which the city already has a good track record, policymakers might also wish to develop sectors the city is not strong in yet. Choices can also be based on other arguments e.g.

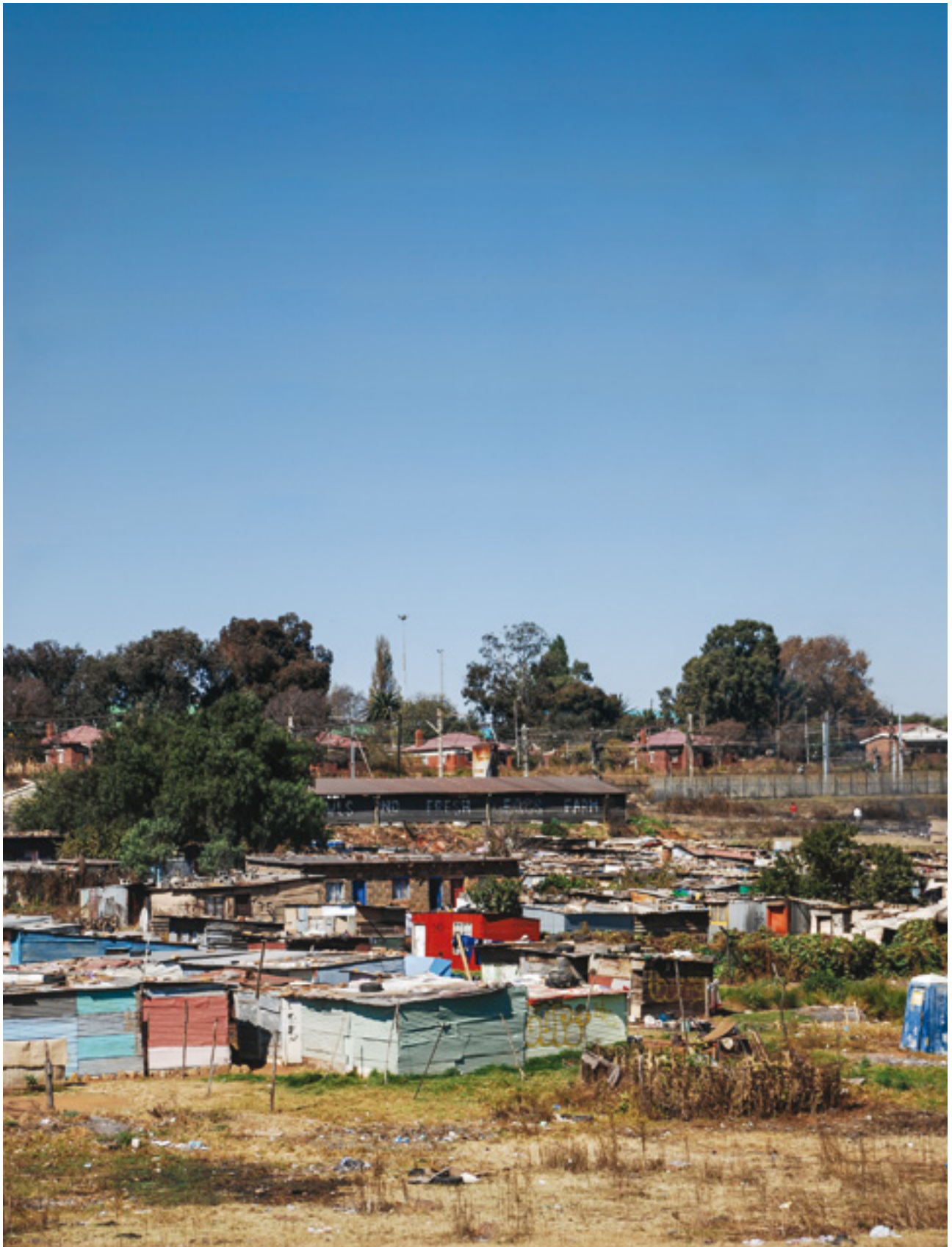
the case of renewable energy where FDI that has one of the highest growth rates in Africa and the world, and is equally essential to addressing the UN's sustainable cities and climate change SDGs. At the same time, compared to other world regions, Africa produces only a small amount of renewable energy. This is further explored in Part B of the online version of this report, which reveals policies that can better attract renewable energy FDI and presents recommendations which African countries could learn from.

The case of food FDI could be similarly posited. It can be argued that food security is the UN's second most important millennium goal, especially in Africa - the world's most food insecure continent. Because Johannesburg attracts approximately 10,000 new and additional migrants each month, generally from rural areas, it is arguable that the food sector could be ideal to create jobs for a large section of

Sustainable and inclusive urban development increasingly hinges on governments and municipalities making the right choices. This also applies to attracting the right kind of FDI to cities

these migrants who often already have agricultural skills. Clearly, these people would likely need to be trained in medium-tech and hi-tech production methods or regional and peri-urban food production and entrepreneurialism. In this way, large numbers of unemployed in Johannesburg (and other African cities) can be put to work, feeding the cities and contributing to food security.

The above example stresses that FDI attraction should be based on clear policies, good governance and vision of what is good for a particular city, especially in terms of inclusive social, economic and environmental development. Once a city has chosen its FDI sectors of interest, the next step would be to investigate what policies and location factors would be necessary to start attracting the new FDI. This requires knowing which cities worldwide are strong in attracting investment in that particular sector but, more importantly, exploring which policies and



Soweto, a township in Johannesburg, does not receive any of the city's foreign direct investment (see figure 7.1)

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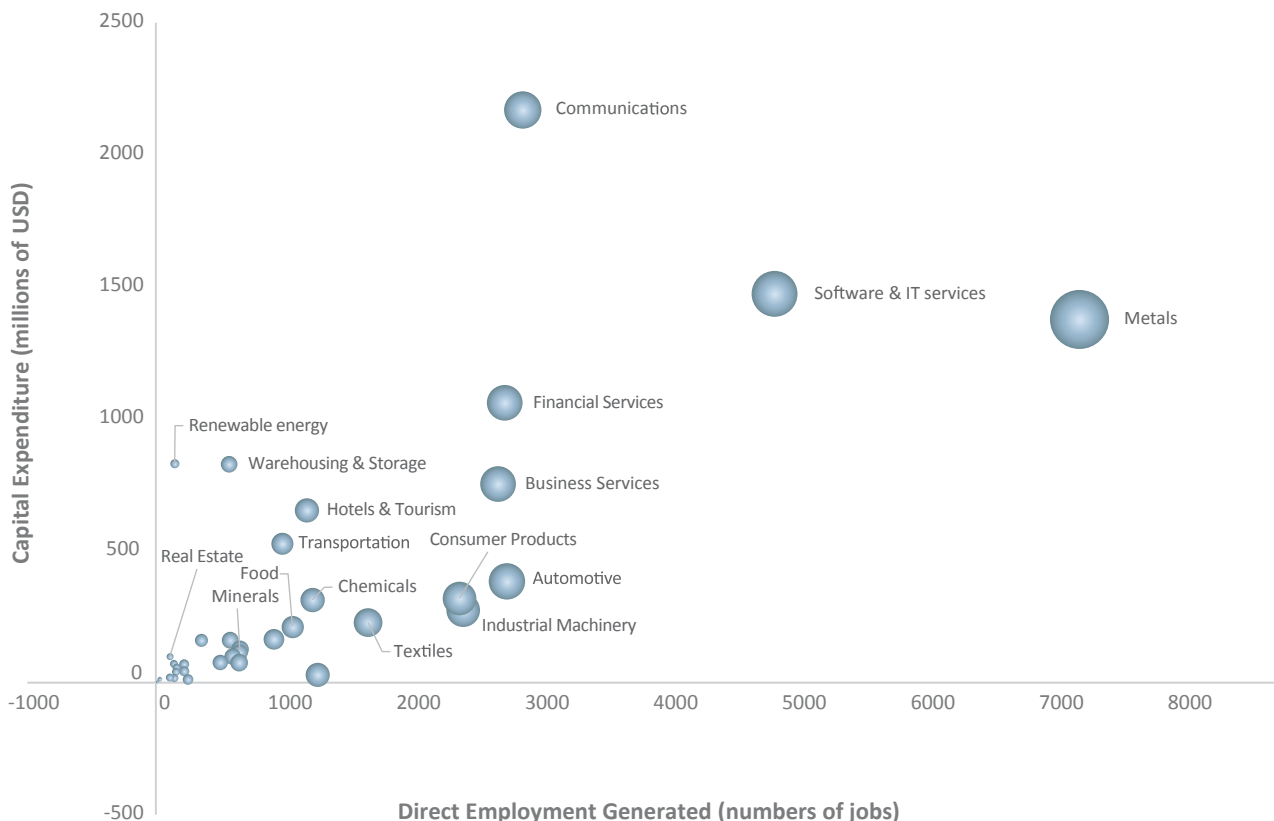
factors have made these cities strongly competitive in these particular sectors, and which cities have invested in them in the past. This requires a type of urban planning that matches a city’s local qualities with the changing demand in local, regional and global networks of investment.

Considering two FDI sectors where Johannesburg is already strong, i.e. communications and software and IT (see Figure 7.2) and two possible future candidates—renewable energy and food—analysis was carried out in the fDi Markets database to determine the top cities in each of these sectors. In the case of communications FDI, the top global cities are, in descending order: Bangalore, Madras, Shanghai, Beijing, Singapore, São Paulo, London and Hong Kong. These cities can be quantitatively and qualitatively explored in great detail to identify which characteristics, locational factors and policies determine their success. Likewise, for the software and IT sector. The global competitors here are

Once a city has chosen its FDI sectors of interest, the next step would be to investigate what policies and location factors would be necessary to start attracting the new FDI

Bangalore, Hyderabad, Shanghai, Singapore, Pune and Madras. For renewable energy the cities are Bangalore, Singapore, Santiago and Dar es Salaam. In the case of food FDI, Shanghai, Bucharest, Moscow, Leeds, Krakow and St. Petersburg proved to be strongest. Studying these cities in detail would provide Johannesburg with critical insight into how to develop the city and its amenities and identify other locational factors to make it globally more competitive in these selected sectors.

Figure 7.2. FDI into Johannesburg, by capital expenditure and direct employment generated (2003-2016)



Source: Wall 2017, based on fDi Markets data

7.4. Source FDI from Johannesburg and other African cities

It has been shown in many studies that almost all cities in the world have the ability to attract investment but that only a limited number of cities have the power to be investors in other cities (Wall, 2009; Wall and v.d. Knaap, 2013). Cities that are able to do so are without exception the well-developed ones that control to a strong degree production and markets in other cities. It is therefore arguable that stimulating a city's outward investment by local firms will also contribute to it reaching a higher urban development status. Furthermore, it has been shown that outward FDI by local firms to other cities does not come at the expense and economic wellbeing of these source cities. Rather, a win-win dynamic has been observed that benefits companies and workers of both source and host cities (Moran, 2006).

It has been shown in many studies that almost all cities in the world have the ability to attract investment but that only a limited number of cities have the power to be investors in other cities

In an analysis of outward FDI of African cities, it became evident that only a handful of such cities have the ability to invest in other African or overseas cities (see Online Appendix 1.51). In fact, only 12 out of hundreds of African cities are doing this. Johannesburg holds the first position in outward FDI and has maintained a positive exponential growth rate of 4% over the period 2010-2016. This makes Johannesburg a true global city, and it is therefore arguably the most developed. Johannesburg is followed by Casablanca which, although showing a much lower volume of investment, has a very high growth rate, reflecting its eminent rise in African investment. In descending order, these two cities are followed by Cairo, Lagos, Nairobi, Cape Town, Port Louis, Lomé, Dar es Salaam, Tunis and Durban. It is noteworthy that most of these cities reveal a negative growth rate of outward FDI over this period, reflecting the overall global trend of FDI shrinkage that originated since the onset of the global recession. Other African cities do not currently hold a significant outward investment status or potential.





Singapore ranks as one of the leading global cities for FDI into communications, IT and software, and renewable energy

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Part A | Chapter 2

China's Foreign Direct Investment into Africa

By Canfei He and Shengjun Zhu





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ICBC's USD5.4 billion acquisition of a 20% stake in Standard Bank of South Africa caused a huge spike in Chinese FDI into Africa in 2008

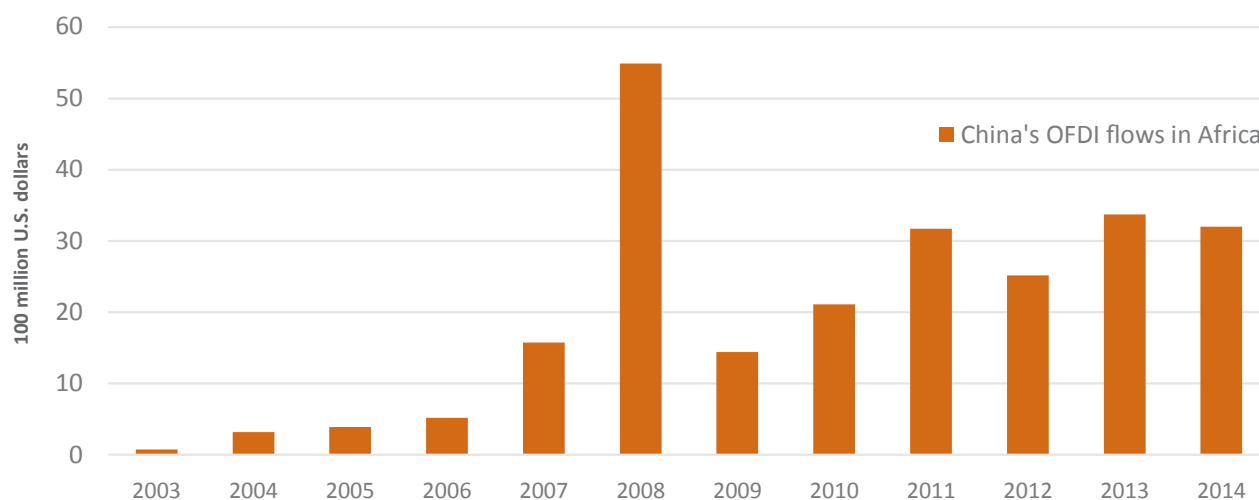
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Introduction

Using recent Chinese data, this section focuses on Chinese FDI into Africa. It first shows the historic development and distribution of China's FDI into Africa and next how this has become more diverse in terms of enterprise ownership; source and recipient regions; and industrial sectors. In this section, it is argued that, due to the complexity and diversity of Chinese FDI in Africa, it would be misleading to revert to simplistic broad statements on whether Chinese investments have positive or negative impacts on the development of the African continent. Host countries' attributes and their political and economic

affiliations with China co-determine the spatial distribution of Chinese FDI.

Since the late 1970s, when China opened its door to global investment capital, it became a popular destination for inward FDI. Driven by its "Bring in FDI" policy and export-oriented industrialization, China achieved rapid economic growth. More recently, China took up a policy of encouraging Chinese capital to "go global" as a component and target of its Tenth Five-Year Plan (2001-2005). This policy was reasserted in China's Eleventh Five-Year Plan in 2005. Subsequently, China's outward FDI flows grew from USD2.7 billion in 2002 to USD123.1 billion in 2014. Its outward FDI stock

Figure 1. China's FDI flows into Africa (2003-2014)

Source: He and Zhu, 2017, based on Peking University data

increased from USD22.9 billion in 2003 to USD882.6 billion in 2014 and China's share in total global FDI increased from 0.3% to 3.4%. Chinese capital has, indeed, significantly expanded its global FDI footprint and now reaches out to 186 countries/regions.

Over the 2003-2014 period, China's FDI stock into Africa increased from USD491 million to USD32.4 billion. China's ballooning influence in Africa has caused widespread debate about its impacts on institutional change and economic development in African countries. Some argue that these FDI flows into Africa have largely been shaped by China's own political and diplomatic considerations, given the dominance of state-owned enterprises (SOEs) in these outward FDI flows (Buckley et al., 2008). Others claim that the motives behind China's FDI into Africa can be explained by conventional FDI theory, including market-seeking, resource-seeking and calculated risk aversion (He et al., 2015).

Since China often takes a non-interventionist political approach and offers investments without attaching further conditions, some argue that China's FDI into Africa has a negligible impact on political governance and/or sustainable economic growth (Brooks, 2007). Others emphasize that Chinese capital offers an alternative source of financing to develop African nations' economies (Cheung et al., 2012). Chinese government aid, investments and infrastructure loans have played a positive role in improving infrastructure, increasing

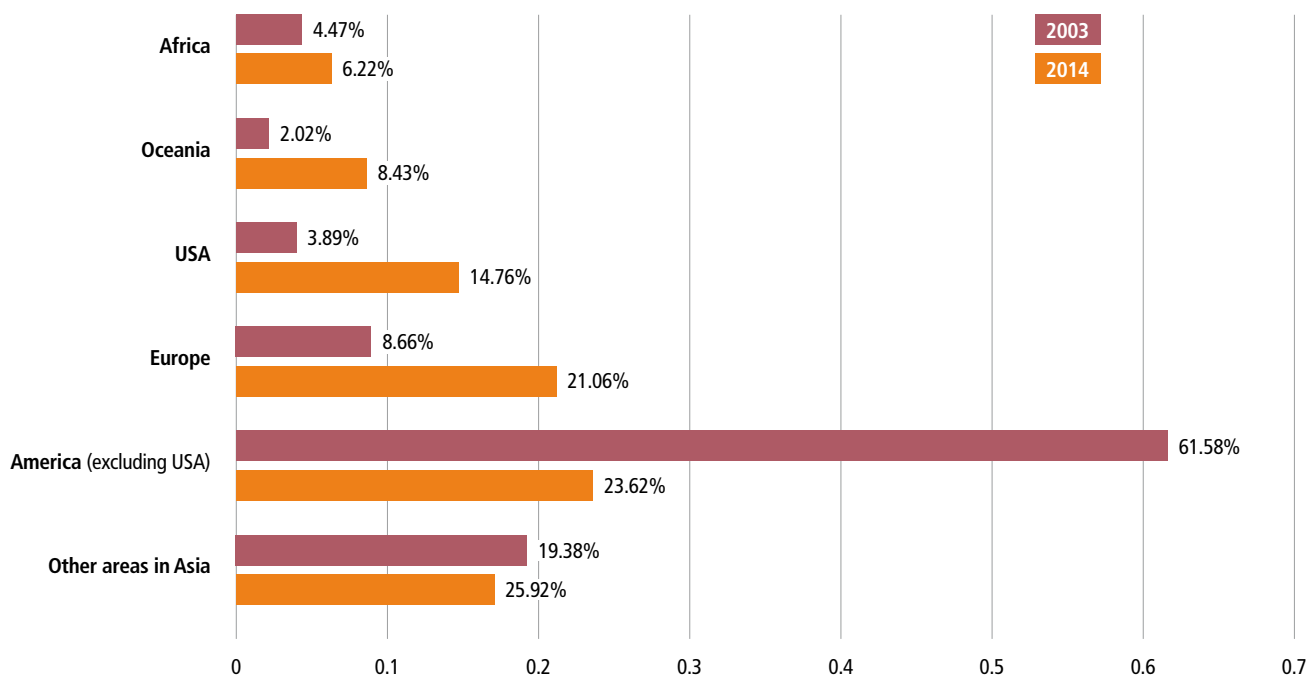
Since China often takes a non-interventionist political approach and offers investments without attaching further conditions, some argue that China's FDI into Africa has a negligible impact on political governance and/or sustainable economic growth

productivity, boosting economic growth and raising living standards in many African nations. The reason for the many unsettled debates with respect to China's role in Africa or the motives behind Chinese capital provision is that most studies tend to presume a homogenous China and a homogenous Africa (Kaplinsky and Morris, 2009). Matters are not as simple as that, since Chinese firms in Africa are different from one another in terms of ownership type, investment motives and investment plans. This section seeks to direct attention towards the complexity and diversity of Chinese FDI into Africa.

Development of China's FDI flows into Africa

The Chinese Ministry of Commerce (MOFCOM) publishes country-level data on outward FDI flows and stocks in its annual report: *The Statistical Bulletin of China's Outward Foreign Direct Investment*. Firm-level data has been

Figure 2. China's FDI flows into different global regions, 2003 and 2014



Source: He and Zhu, 2017, based on Peking University data

derived from a dataset that comprises outward FDI data published by MOFCOM approved by the authority. Further data on Chinese firms that have invested in Africa was collected from the webpage of MOFCOM.

China's FDI flow into Africa proved surprisingly small up to 2006 but increased rapidly thereafter (see Figure 1). From USD748 million in 2003 it expanded to USD5.4 billion in 2008, due partly to the Industrial and Commercial Bank of China's USD5.4 billion acquisition of a 20% stake in Standard Bank in South Africa in 2008. After this one-off transaction and as an outcome of the global financial crisis, FDI fell to USD1.44 billion in 2009.

In 2009, China became Africa's largest trade partner, which assisted a recovery of China's FDI into Africa and a rebound to USD2.1 billion in 2010 that steadily grew to USD3.2 billion in 2014. In short, China's FDI into Africa started late, grew fast and stabilized in the 2010s.

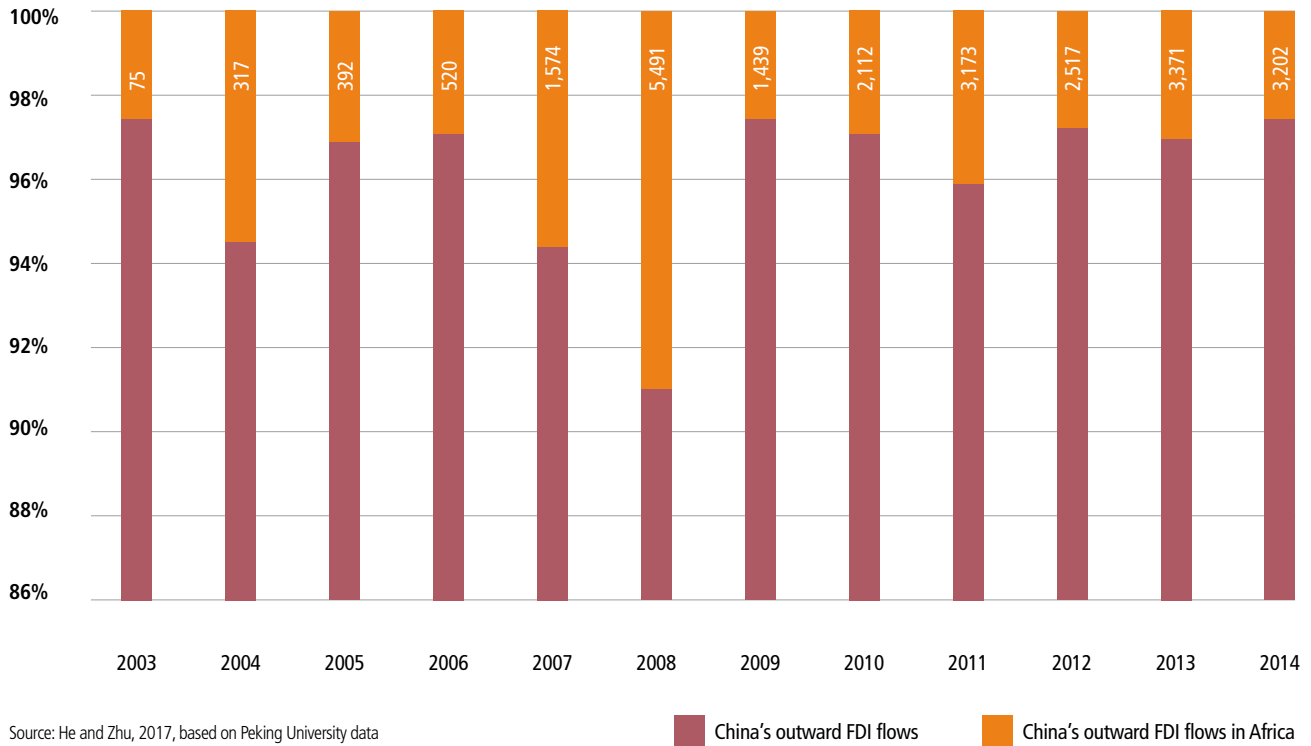
However, even after two decades of rapid expansion the 6.2% share of China's FDI flow into Africa in 2014 remains small compared to the total global FDI inflow or those of the USA and Europe (Figure 2). The lion's share of China's outward FDI

In 2009, China became Africa's largest trade partner, which assisted a recovery of China's FDI into Africa and a rebound to USD2.1 billion in 2010 that steadily grew to USD3.2 billion in 2014

flows went into the Americas, Europe and Asia, which accounted for 70% of the total. During 2003-2014, the share of China's FDI flow into Africa remained around 4 to 6%, although it increased dramatically in 2008 (see Figure 3) due to the above mentioned acquisition of a 20% stake in Standard Bank in South Africa by the Industrial and Commercial Bank of China.

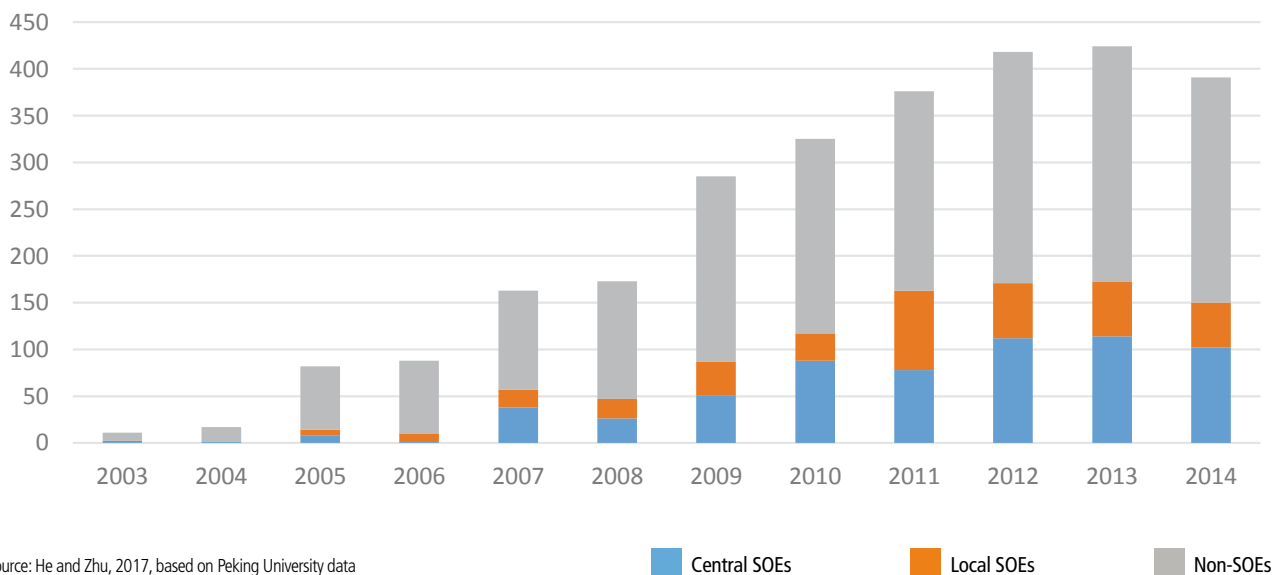
As the overall size of China's outward FDI increased, investments in Africa also became more diverse. During 2003-2014, the number of Chinese investors in Africa increased from 11 to 391. In total, there were 620 central government SOEs, 371 local government SOEs, and 1,762 non-SOEs (see Figure 4). Some studies tend to overestimate Chinese SOE

Figure 3. Share of China's FDI flow into Africa (USD millions and %, 2003-2014)



Coastal cities like Shandong are the largest source of Chinese FDI into Africa after state-owned enterprises

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Figure 4. Types of Chinese investing enterprises in Africa (2003-2014)

Source: He and Zhu, 2017, based on Peking University data

investment in Africa. Whereas investments by private firms and entrepreneurial local government SOEs are an important factor in the economic and trade relations between China and Africa (Wang, 2007), central government SOEs must comply with the Government of China's diplomatic and trade policies. Consequently, the investment motives of Chinese private enterprises in Africa are more market-oriented than those of SOEs.

In 2014, all Chinese provinces were source regions of Chinese FDI into Africa except for the autonomous region of Tibet. During 2003-2014, in addition to 620 central government SOEs, many local government enterprises invested in Africa (see Figure 5). After the central government SOEs, China's developed coastal region became the largest source of Chinese FDI in Africa (see Figure 6).

By 2014, Chinese capital had entered 52 African countries. Algeria, Chad, the Democratic Republic of the Congo, Egypt, Ethiopia, Ghana, Kenya, Mauritius, Mozambique, Nigeria, South Africa, Sudan, Tanzania, Uganda, Zambia and Zimbabwe accounted for the lion's share of the FDI flows and stocks (see Figures 6 and 7). The share of FDI into Algeria increased dramatically from 3.3% in 2003 to 20.8% in 2014, due to the end of its civil war and the subsequent need for infrastructure development and other investments. China's FDI flows into Zambia also

increased over this period. Chinese investments there ranged from mining interests in Zambia's copper belt to investments in agriculture, manufacturing and tourism. Southern Africa ranked the first in terms of China's FDI stocks in 2003 and 2014, followed by Western and Northern Africa.

There were more than 100 Chinese enterprises in Angola, Egypt, Ethiopia, Ghana, Kenya, Nigeria, South Africa, Tanzania and Zambia. Chinese central government SOEs tended to locate in Angola, Ethiopia, Nigeria, South Africa, Tanzania, and Zambia. Among them, Zambia ranked the highest with 36 Chinese central government SOEs investing in it, followed by South Africa with 35. In 2014, China's local government SOEs and non-SOEs were concentrated in Ethiopia, Nigeria, Tanzania and Zambia. For instance, Nigeria was the host country of 237 non-SOEs and 23 local government SOEs. Jiangsu Province is one of the largest trade partners of Nigeria with textile, food processing and footwear local government and non-SOEs investing there. In 2014, Jiangsu established a Small- and Medium-sized Enterprises Development Office in Abuja, Nigeria, to facilitate further development of FDI from Jiangsu province.

Figures 8a and 8b show the main source regions and destination countries/cities of Chinese FDI in Africa. The spatial distribution of both resembles that of China's FDI in Africa in Figure 6. China's developed

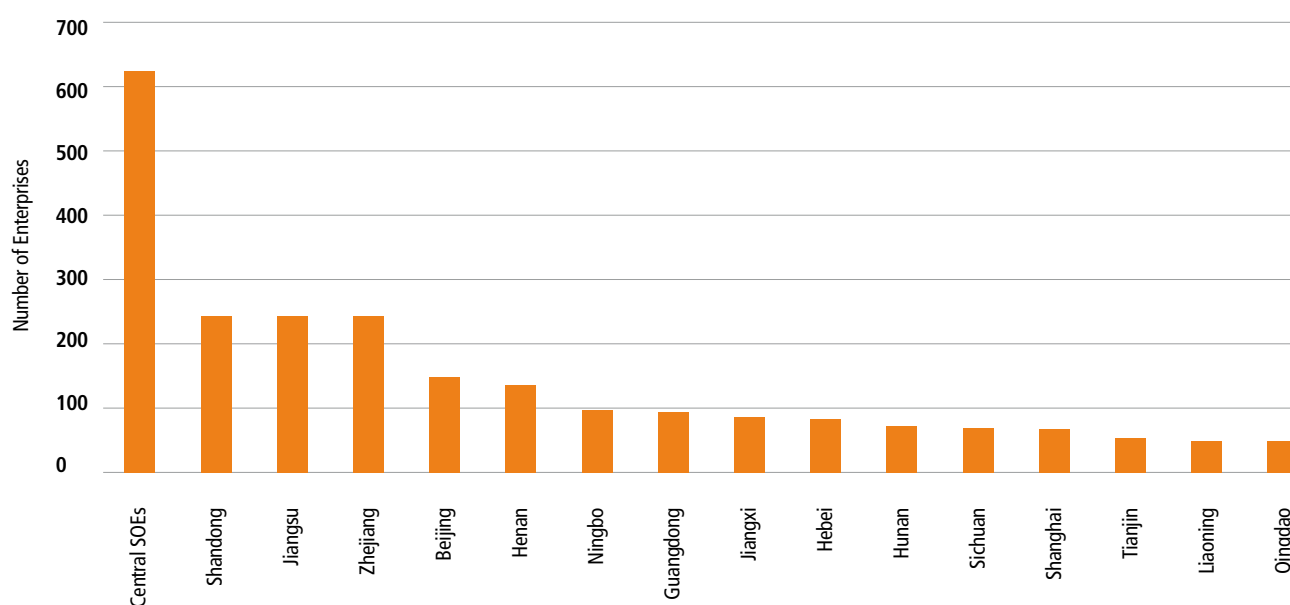
coastal regions pioneered investing in Africa, particularly large cities like Beijing, Hangzhou, Shanghai and Shenzhen. South Africa and Zambia in Southern Africa, Ethiopia in Eastern Africa and Egypt in Northern Africa became the main destination countries of Chinese FDI. In 2015-16, China led greenfield FDI in Africa to a large extent as the result of a contract between the Government of Egypt and China's Fortune Land Development Co. (CFLD) for the development of 5,700 hectares of land east of Cairo (African Development Bank Group, 2017). Some leading African cities in terms of attracting Chinese greenfield FDI include Addis Ababa, Cairo, Cape Town and Johannesburg. Cairo and Johannesburg are also the cities which received the highest value of total greenfield FDI in Africa (Wall et al., 2018).

Industrial dynamics

Figure 9a shows that in 2014, there were 1,503 and 1,099 Chinese enterprises respectively in the secondary and tertiary sectors in Africa, accounting for 55% and 40% of the total. At a more disaggregated level, Chinese enterprises invested mostly in manufacturing (e.g. textiles, construction,

mining equipment, manufacturing and mineral processing); geological exploration and development; infrastructure; import and export trading; and retailing (Figure 9b). Chinese enterprises, notably central government SOEs, focused their investments on geological exploration and development, especially in the petroleum and nonferrous metals sectors, in line with the Government of China's policy consideration of domestic energy security. Petroleum imports accounted for 34% of China's domestic consumption in 2001 and increased to around 60% in 2015. Consequently, energy security has become a crucial target of Chinese outward FDI flows. Chinese enterprises, particularly SOEs, must comply with this. Furthermore, China's energy and resources acquisition is often tied to African infrastructure construction projects. Chinese enterprises provide funding and expertise for infrastructure development in specific African countries with a view to promoting political stability and improving the living standards in those countries, as well as putting in place the infrastructure to facilitate the export of primary resources. For example, the Addis Ababa-Adama Expressway, with a total length of 78 kilometres, was designed and constructed by China

Figure 5. Source regions of China's FDI into Africa with more than 50 investing enterprises (2003-2014)



Source: He and Zhu, 2017, based on Peking University data

Communications Construction. This expressway is the first in Ethiopia and the first with such scale and quality in Eastern Africa. Some consider foreign resource exploitation contracts controversial. New export arrangements with China and India, they argue, do not contribute to Southern African economic development since they do not benefit the local economy and fail to develop vertical industrial integration (UN-Habitat, 2014).

Chinese investments have been concentrated on different economic sectors in different African countries (see Figure 10). In politically stable and relatively developed countries (e.g. Ethiopia and South Africa), Chinese investments concentrated on manufacturing, taking advantage of low production costs and large domestic markets. Many Chinese apparel and footwear firms chose to manufacture in Ethiopia's Eastern Industry Zone in Dukem, 37 kilometres south of the capital Addis Ababa, providing cheap and high-quality products for both the Ethiopian and the international markets. Chinese small- and medium-sized enterprises avoided less developed African countries with low levels of political

stability and small domestic markets (e.g. Zambia and the DR of Congo). Only SOEs were able to tap into such countries doing business mainly in geological exploration and development and some infrastructure and construction investment. Finally, Chinese capital was new in countries like Algeria and Kenya where Chinese investors tended to start with commercial services to familiarize themselves with the local business environments.

During 2003-2014, 1,698 Chinese parent companies established 2,738 subsidiaries in Africa. Figure 11 shows the linkages between parent companies in China and their subsidiaries in Africa in manufacturing, construction, geological exploration and development, import and export trade and wholesale and retail trade. Most of the 856 manufacturing parent companies invested in manufacturing, although some subsidiaries were also established in downstream and upstream sectors as commercial services and import/export trading to support the manufacturing activities. The dominance of manufacturing indicates that Chinese FDI is mainly market-oriented and searching for production at low-cost locations.

Figure 6. Chinese FDI into Africa: Source regions and destination countries (2003-2014)

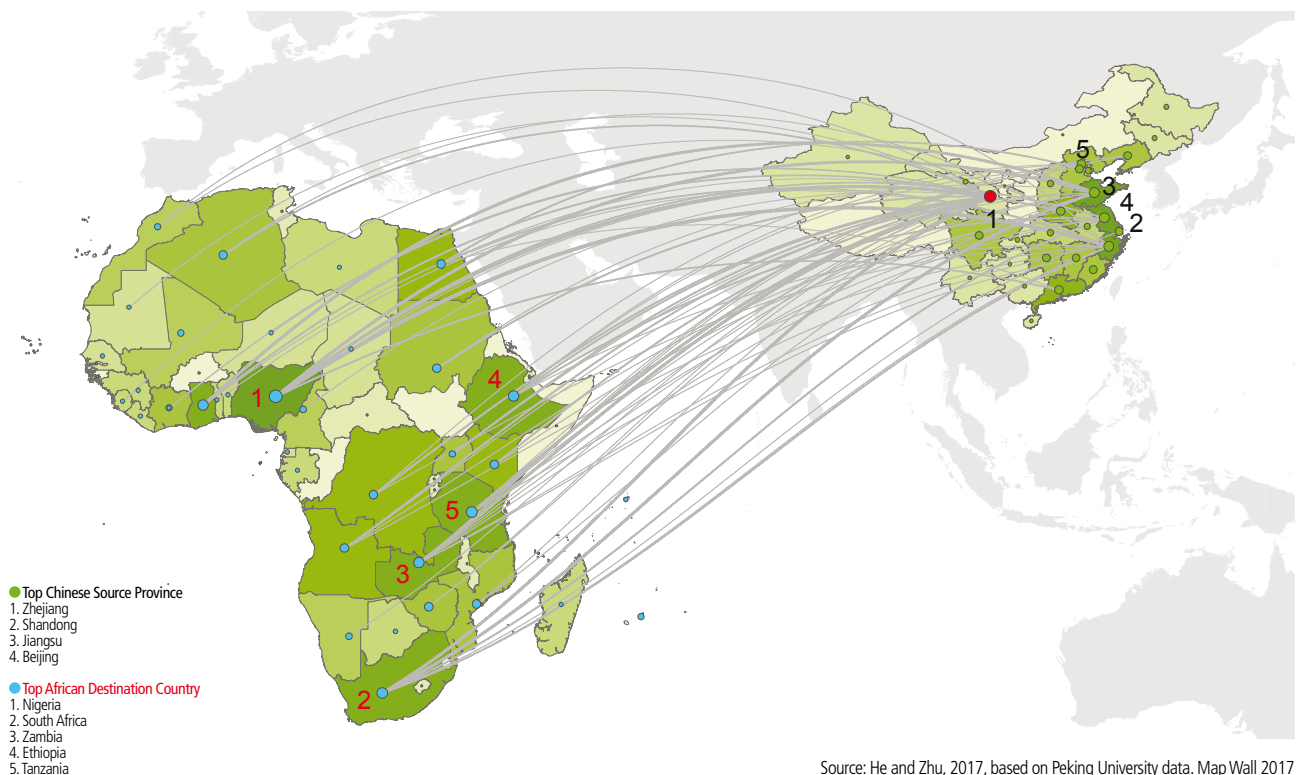
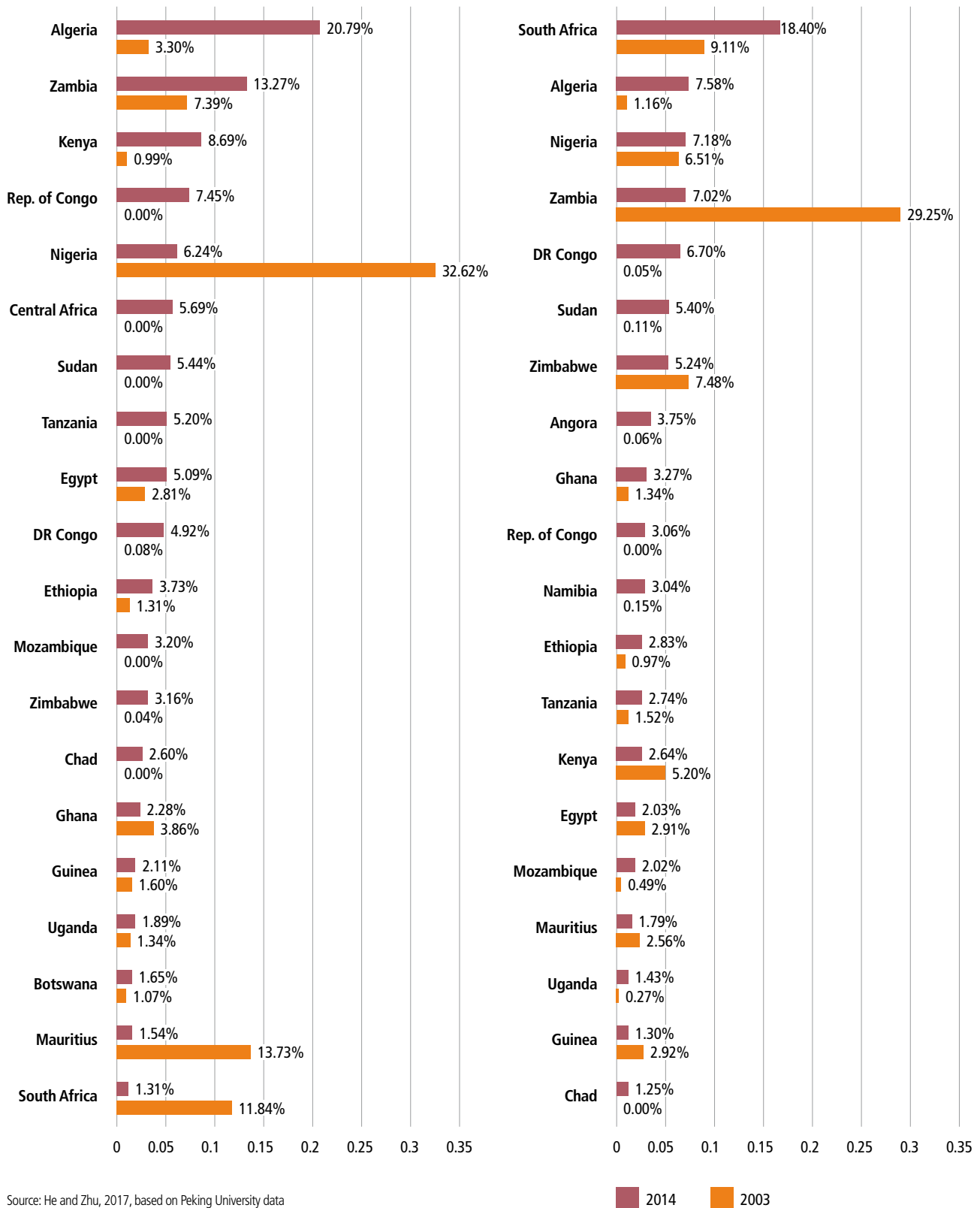
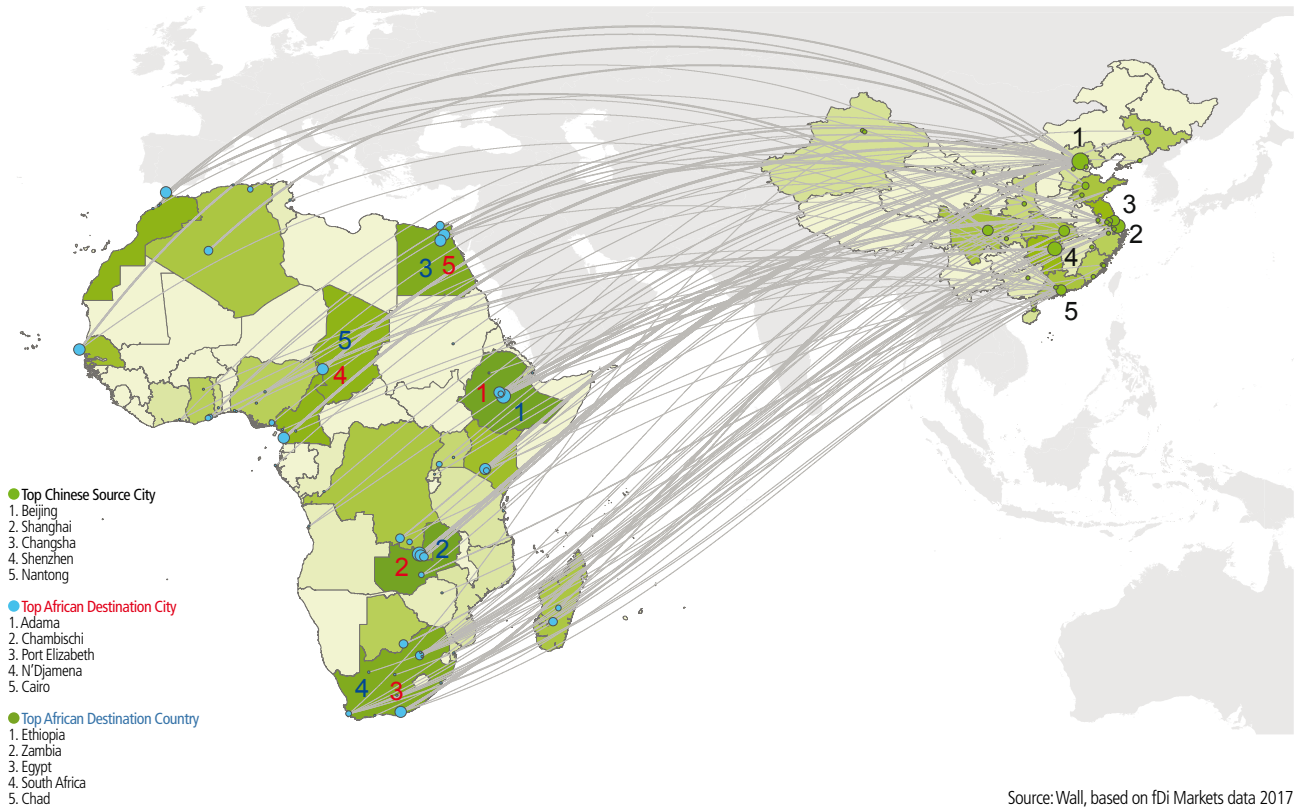
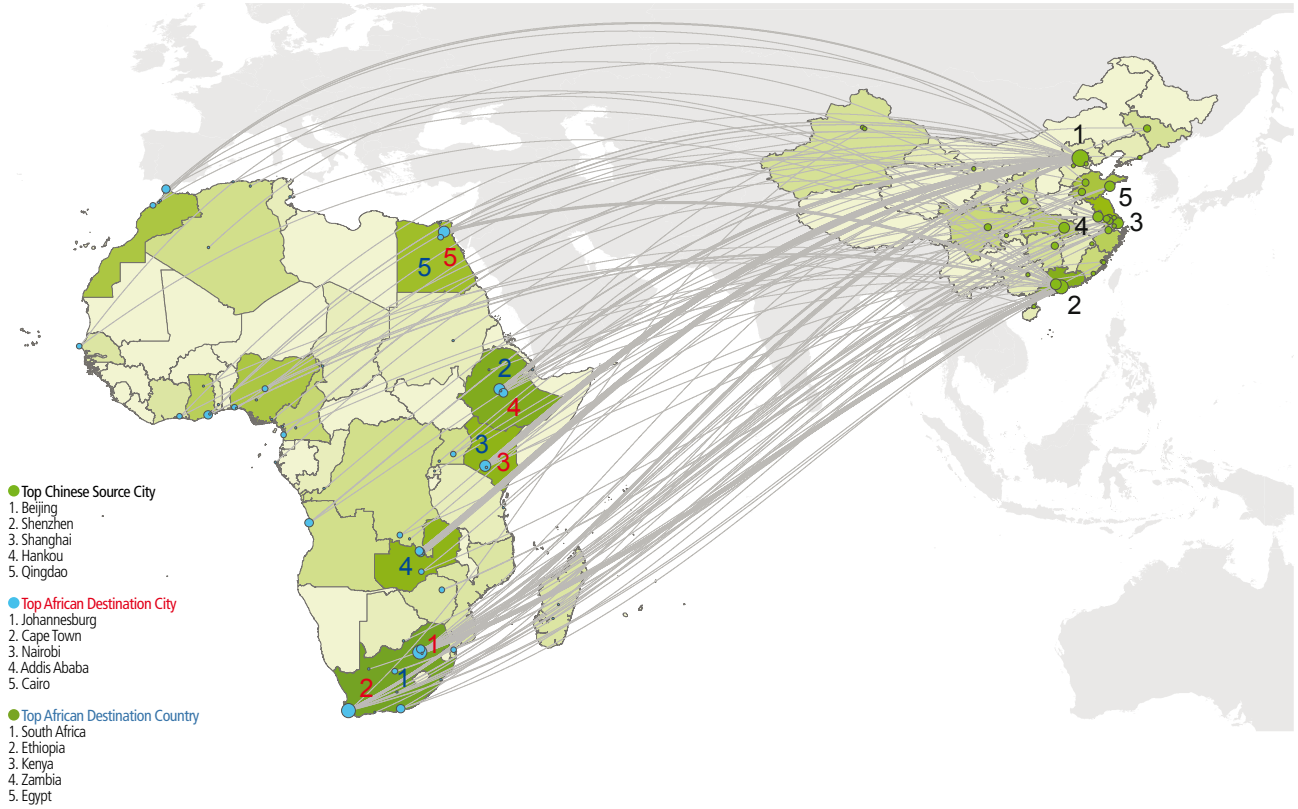


Figure 7. Top 20 Africa destinations of China's FDI flows (a) and stocks (b)

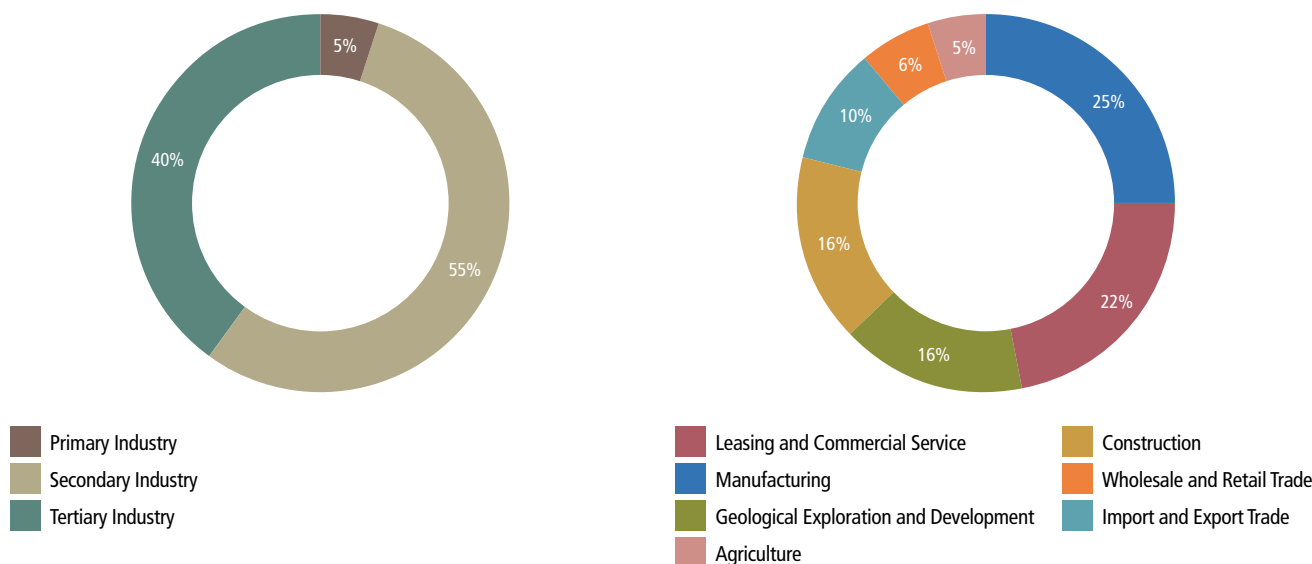


Source: He and Zhu, 2017, based on Peking University data

Figure 8. Count (a) and value (b) of Chinese Greenfield FDI into Africa



Source: Wall, based on fDi Markets data 2017

Figure 9a. and b. Industrial composition of China's outward FDI into Africa, 2014

Source: He and Zhu, 2017, based on Peking University data

The parent companies of construction and mining enterprises in Africa were, by and large, involved in the same sectors in China but they also diversified. For instance, construction parent companies owned 155 commercial service subsidiaries to help them build up connections with African and global customers, collect market information and provide managerial services.

Determinants of China's FDI into Africa

The following research focuses on all countries in Africa and employs the TOBIT model since there is no Chinese FDI in some African countries. Variables and their definitions are shown in Table 1. Statistical results in Table 1 indicate that Chinese FDI tends to enter countries with lower levels of political stability. This finding runs counter to the risk-aversion argument proposed by conventional FDI theory that often considers political instability an unfavourable determinant.

There are a number of reasons why Chinese firms do not necessarily behave as conventional FDI theory would predict. Firstly, SOEs may not be profit-maximisers if guided by Chinese central government political and diplomatic considerations. For instance, as noted above, in 1993, China became a net petroleum importer. After 2003, China surpassed Japan to become the second in the world in terms

As a relative latecomer in Africa, Chinese capital tends to choose underinvested, relatively less stable countries to avoid competition with investors from the advanced economies

of petroleum consumption after the USA, and most of China's petroleum consumption must be met by imports. Energy security has therefore become a crucial target of Chinese outward FDI. Chinese enterprises, particularly SOEs, sometimes had to enter countries with lower levels of political stability if the latter could offer abundant resources.

Secondly, African countries with higher levels of political stability have often already attracted a large number of foreign investors, particularly from advanced economies. As a relative latecomer in Africa, Chinese capital tends to choose underinvested, relatively less stable countries to avoid competition with investors from the advanced economies. Angola is a case in point. The country has been plagued by civil wars for decades. Chinese investments in Angola have been linked to infrastructure projects to assist in Angolan reconstruction needs after the civil war in 2002.

Thirdly, there may also be long-term considerations anticipating future high returns and seeking to occupy a clear, unique and advantageous position in the market before many competitors pour in. For example, Huawei has located one of its eight global innovation centres in Lagos and invested USD6 million in the city. Chinese small- and medium-sized enterprises also manufacture consumer goods for the Nigerian people, accounting for 90% of Nigeria's total domestic consumption.

Fourthly, in relatively unstable countries, the bargaining power of the Government of China and investors may be stronger vis-à-vis the governments in countries that attract only modest amounts of investment. Chinese firms may take advantage of government backing so that the real risks to a particular investor could be much lower than it appears. For instance, Shanda Aluminum Company was established in Newcastle, South Africa with the help of the Government of Shanghai. The Shanghai Commission of Commerce organized a visit to South Africa to collect market information and meet with local authorities beforehand to facilitate the establishment of Shanda.

Fifthly, some Chinese firms, particularly small private firms, may not have the funds and resources to obtain sufficient information. Since they may not be as familiar with the business environment in some African countries, investment decisions may, therefore, be made with insufficient attention to the actual associated risks.

Lastly, political stability indicators are calculated from the viewpoint of advanced economies' investors and may not necessarily reflect the risk perception by firms from emerging economies like China.

Furthermore, Chinese capital prefers democratic countries since additional transaction costs may be demanded in countries with low levels of democracy due to issues like corruption. Existing studies on the locational determinants emphasize the relationship between well- and poorly designed institutions, on the one hand, and FDI, on the other, but often fail to recognize that the institution in the host country is often neither monolithic nor homogeneous. An FDI host country's institutions may be seen as well designed in terms of political stability while scoring poorly in terms of democracy. The correlation index between those two institutional factors is only 0.23. Countries like Zambia have been assigned high scores on democracy but low scores on political stability.

Table 1.
The determinants of Chinese FDI in Africa

Variables	2003-2014	2003-2007	2008-2014
Political stability index	--	--	--
Democracy index	++	+++	0+
Resource-seeking motives	0+	++	0+
Market-seeking motives	+++	+++	+++
Asset-seeking motives	0+	0+	0-
Economic openness	0+	0-	0-
Economic stability	0-	0+	0+
Political proximity	+++	+++	+++
Economic proximity	+++	+++	++
Geographic proximity	0+	0+	0-

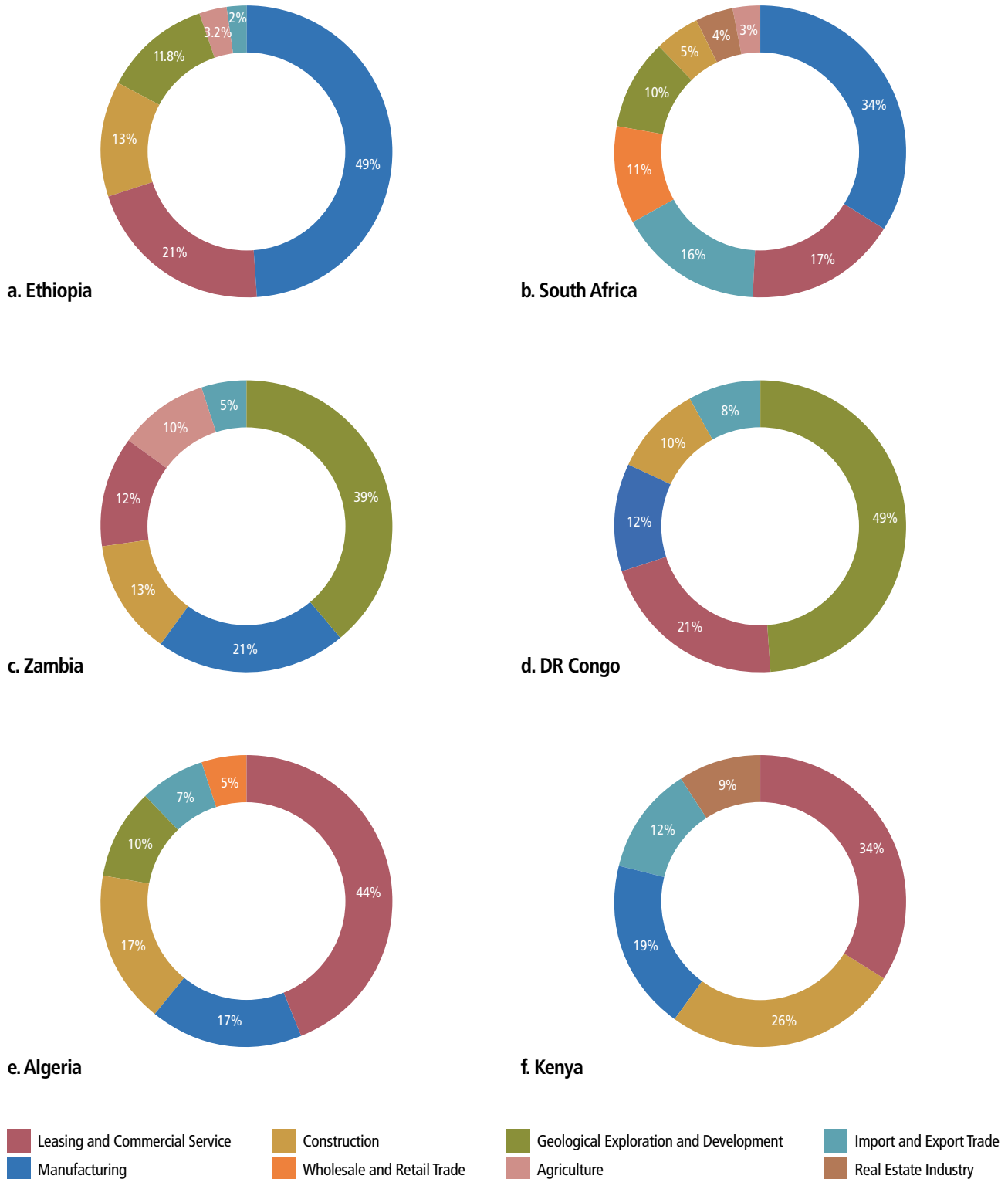
Source: He and Zhu, 2017, based on Peking University data

+++ Very significant and positive relation -- More significant and negative relation
 ++ More significant and positive relation - Significant and negative relation
 + Significant and positive relation 0+ Not significant but positive relation
 --- Very significant and negative relation 0- Not significant but negative relation

Chinese outward FDI flows were attracted to countries with abundant natural resources from 2003 to 2007 because China increasingly relied on imported resources to meet its growing domestic consumption. However, Chinese investors in Africa became less resource-seeking in the 2008-2014 period, as shown by the not statistically significant resource-seeking variable in the 2008-2014 model (see Table 1). One possible explanation is that, even though Chinese SOEs must comply with the central government's policy on achieving energy security, the typically more profit-seeking than resource-seeking entrepreneurial non-SOEs sought to tap into new markets. Since the FDI share of non-SOEs increased from 2008 to 2014, overall Chinese FDI in Africa became less resource-seeking. The coefficient of the market-seeking variable is significant and positive, confirming that Chinese FDI gradually became more market than resource oriented.

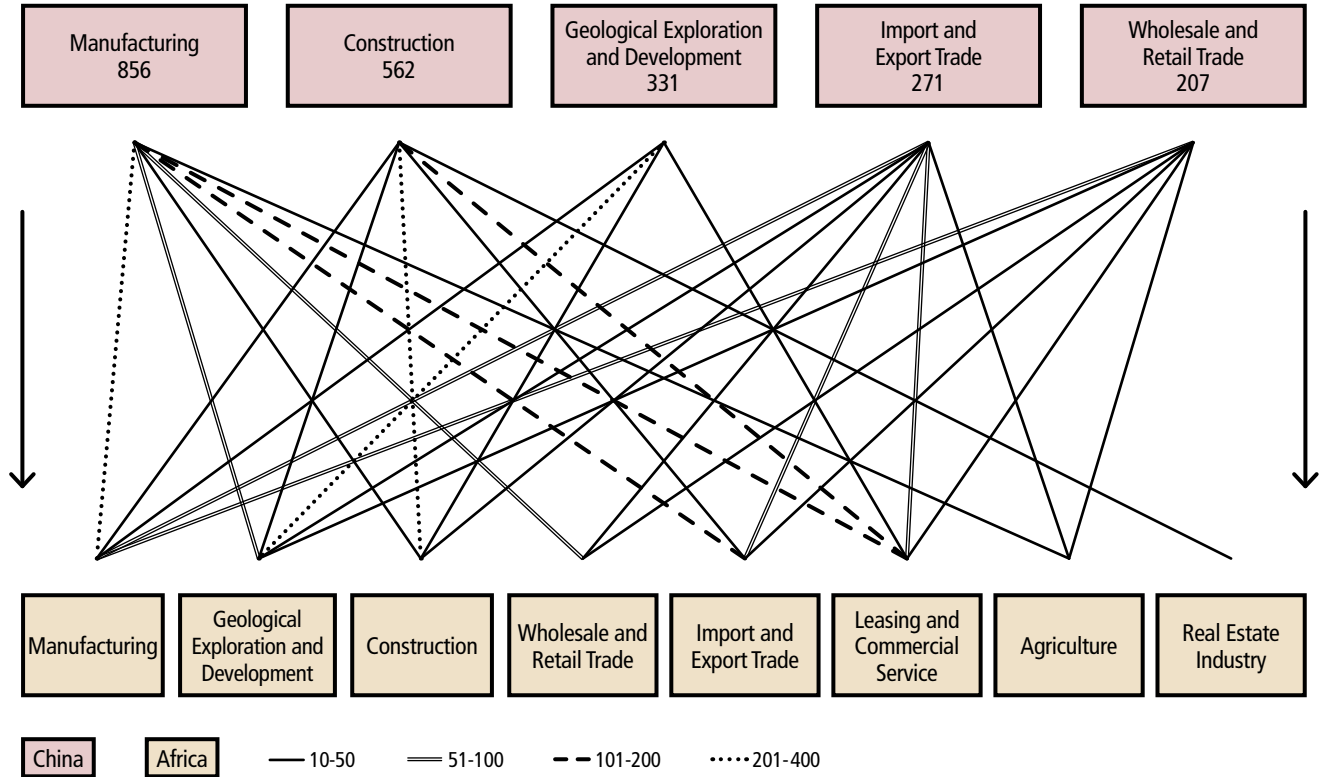
For instance, Lifan Motors began business in Ethiopia in 2007. A few years later, it established a subsidiary, Yangfan Motors in Addis Ababa. Recently, it has moved into a new plant in the Eastern Industry Zone in Dukem, 37 kilometres outside the capital, Addis Ababa. The new plant employs in excess of 150 workers, 97% of which are Ethiopians. So far, Lifan Motors has sold about 3,000 cars in Ethiopia. In 2016, 821 cars were purchased by Ethiopia's government as

Figure 10. China's sectors (2014), (a) Ethiopia, (b) South Africa, (c) Zambia, (d) DR Congo, (e) Algeria and (f) Kenya



Source: He and Zhu, 2017, based on Peking University data

Figure 11. Parent companies in China and their subsidiaries in Africa (2014)



Source: : He and Zhu, 2017, based on Peking University data

taxi. Lifan Motors' business in Ethiopia is obviously more a long-term investment seeking to take advantage of the large domestic market and profit rather than being driven by resources and energy. In addition, the asset-seeking variable is not significant, indicating that Chinese FDI was not attracted to Africa for new, advanced technologies.

Each diplomatic event between China and the host country is assigned a score. A weighted sum value is calculated to measure the political proximity (i.e. the strength of political connections). African countries with close political connections to China are likely to receive more Chinese FDI since such host countries tend to provide a more favourable business environment for Chinese FDI. The Chinese government can be quite involved in Chinese enterprises going global. For instance, Shanghai municipal government has a close relationship with South Africa. To assist Shanghai Light Industry Equipment Company (SLIEC) with its investment in South Africa, the Shanghai Commission of

Commerce sent a delegation to South Africa in 1997 to collect market information and meet with local authorities. A comprehensive report was compiled, on which basis SLIEC invested USD1.82 million in Newcastle, South Africa, and established a subsidiary, the Shanda Aluminum Company in 1998. Enterprises often collect information about countries by trading first to evaluate the feasibility and profitability of investing there. Finally, since the geographical distances between China and all African countries are quite similar, the number of flights between China and a specific host country is used as a proxy of geographical proximity between those two countries. However, it plays an insignificant role in our story.

Impact of China's FDI

China is still relatively new as an investor in Africa and investments only started to take off in 2003. The scale of China's FDI flows into Africa is still quite small, accounting for 2.6% of the global total. Given

the limited time and scale, the overall impact of Chinese FDI in Africa cannot yet be fully assessed and should therefore not be overstated in either a positive or negative way. Nevertheless, the following section attempts to provide a preliminary assessment of the impacts of Chinese FDI in Africa.

Economic impacts

Through FDI, Chinese firms have helped establish complete industrial chains in Africa. For instance, the China National Petroleum Corporation founded an entire gasoline industry in Sudan, including exploration, production and refining capacity, transportation and sales capabilities. Since resource-based industries are often at the core of other sectors of the economy, Chinese FDI in these industries serves as a catalyst for broader economic development if local authorities have a developmental attitude.

Chinese enterprises have also established a large quantity of infrastructure in Africa, including roads, railways, ports, dams and bridges. According to the 2010 World Bank report *Africa's Infrastructure: A Time for Transformation*, African infrastructure networks lag behind those of other developing regions, and infrastructure deficiencies emerge as a main constraint to doing business, depressing enterprise productivity by about 40%. The chapter on infrastructure in Part B of the online version of this report also concludes that road integration can have a significant impact on FDI attraction. Cities that are well connected with their larger surrounding regions through road infrastructure tend to attract more FDI compared to those with more limited connections with their immediate regions. The cost of addressing Africa's infrastructure shortfalls is estimated at around USD93 billion annually, more than twice the current investment by African countries. Consequently, Chinese FDI is often accompanied by infrastructure construction and improvements that will contribute to Africa's long-term development.

In 2010, USD50.7 billion was invested in African infrastructure, USD9 billion of which originated from China. This included, in 2013, Sino Hydro, a Chinese construction company that helped Ghana build a 400-megawatt hydroelectric dam on the Black Volta River that increased the installed electricity generation capacity in Ghana by 22%. Another example is the South Outer Ring Expressway Project south of Abuja, Nigeria. This project also included ancillary work, earthwork, drainage work, road construction, bridge

construction, city lights, water systems, and electricity and communications facilities. These investments have helped to address Abuja's infrastructure needs, improved the business environment and stimulated long-term economic development.

A feature that distinguishes Chinese FDI from investments from advanced economies is how investments and infrastructure construction have been interconnected with development assistance from China. It is worth noting that China's development assistance is nothing new. It was common even in the 1970s, as China saw African countries as third-world "comrades". Nowadays, development assistance is offered by China to establish a long-term, mutually beneficial relationship with African countries, albeit that some criticize China for using development assistance as a means to enter Africa with its FDI. Infrastructure construction is only one part of the

Cities that are well-connected with their larger surrounding regions through road infrastructure tend to attract more FDI compared to those with more limited connections with their immediate regions

China-Africa economic, political and trade cooperation. For instance, China's investments in Angola have been primarily linked to natural resources, on the one hand, and infrastructure projects on the other to assist in Angolan reconstruction needs after the civil war in 2002. The Chinese government provided massive low-interest or interest-free loans for infrastructure construction. Chinese enterprises collaborated with the Angolan government and enterprises to build infrastructure through the provision of equipment and other products imported from China. The Angolan government repaid the debt with natural resources. This is the "Angola Model" whereby trade, development assistance, investments and infrastructure constructions are intertwined with one another.

Similarly, in DR of Congo where China Railway and other Chinese companies built roads, expressways, public housing, hospitals and other facilities in Bandundu, Katanga and Kinshasa. In exchange, the government of the DR of Congo allowed China

Railway to establish and run a copper-cobalt mine in partnership with a local company using imported equipment from China. From 1956 to 2005, China provided USD44 billion in low-interest/interest-free loans for 900 infrastructure projects in African countries. In 2009, 45.7% of China's foreign aid funds were channelled to Africa, 61% of which were for infrastructure improvements. Up until 2009, China had helped Africa build more than 2,000 km of railways, more than 3,000 km of highways, 52 stadiums, and 11 bridges, besides ports, airports, water supply facilities, and telecommunication infrastructure.

Chinese enterprises often settle for lower earnings than those from other countries investing in Africa since Chinese enterprises often operate through joint-ventures sharing the profits with their African partners. For instance, in 2006, the Chinese state-owned metallurgical and mineral resources developer and processor Sinosteel Corporation reached an agreement with Samancor Corporation, South Africa's largest chrome ore owner to jointly exploit chrome

Chinese enterprises often settle for lower earnings than those from other countries investing in Africa since Chinese enterprises often operate through joint-ventures sharing the profits with their African partners

resources in South Africa. Sinosteel and Samancor each held a 50% stake in the joint venture. The deal between these two was a win-win project with Sinosteel acquiring natural resources and South Africa receiving technology, managerial and marketing know-how, funds and long-term access to the Chinese market. This has contributed to economic growth and increased bilateral trade for South Africa. It is argued, at times, that such collaborative operations between Chinese SOEs and large African firms are controversial because the benefits of these joint-ventures are reaped mostly by local authorities and corporate elites rather than the African people. That may be so, but SOEs are not the sole Chinese investors in Africa.

China's non-SOEs are more active and involved in retailing, trade and low-tech primary processing industries than SOEs, and thus have much broader

and deeper impacts on local economic development in Africa. Unlike SOEs focusing on infrastructure and natural resources, Chinese non-SOEs tend to diversify more in Africa and often engage in several sectors. Since non-SOEs are often more engaged in local economic networks they provide more opportunities to develop human capital and create jobs in the host countries. Non-SOEs also manufacture and sell cheap consumer goods, reducing the living expenses of African people.

The success of the Angola Model is closely tied to Angolan government policy: natural resources in exchange for infrastructure and equipment. However, whether local economic development and the African people can benefit from Chinese FDI is highly dependent on institutional factors and how the host country authorities choose to make use of the money. When some African governments (e.g. Nigeria) decided to move from "natural resources for infrastructure and equipment" to "natural resources for cash", things changed. While the former approach is normally beneficial to local development and the people as a whole, the latter one may only favour the country's political and economic elite. The inflow of cash may be used to finance opulent lifestyles among powerful elites rather than being reinvested in the economy. Therefore, improving transparency within society and the political system is an important matter facing African countries.

In other words, Chinese capital does not enter Africa to merely exploit its resources and then leave. Rather, most Chinese investments in Africa are long-term. As some have pointed out, China has a clear strategy for Africa, but Africa has no strategy for China. A way forward is for African countries to seek more economic diversity rather than relying solely on Chinese investments. They should more systematically learn from FDI-providing firms, whether Chinese or from other countries and, most importantly, increase governance, transparency and accountability, especially in natural resources industries.

Social and environmental impacts

Job creation is important to all FDI host countries, economically and socially. Employment generation is important for contemporary Africa with around 60% of its population under the age of 24. In 2014, the correlation index between Chinese FDI stocks and employment increments in African countries was around 0.47, and that between Chinese outward FDI stocks and the increase in the number of enterprises 0.42. Statistically, Chinese FDI into

Africa is positively related to job creation. Chinese investments in labour-intensive industries (e.g. primary processing, apparel, retailing and footwear) have been particularly important in employment generation. In Ethiopia, Ghana, Kenya, Nigeria, Tanzania and Zambia, more than half of the foreign investments in manufacturing originated from China and have resulted in significant employment growth in those countries. Infrastructure construction demands a large number of unskilled or semi-skilled workers. Every USD1 billion of Chinese investment in infrastructure, for instance, has generated around 110,000 jobs in Egypt, Morocco and Tunisia.

In the energy and natural resources industry, Chinese investors have been moving upward and downward along the value chain to include more labour-intensive sectors. For instance, in 2006, as the DR of Congo's government banned exports of cobalt ore, the Ningbo Xinglong cobalt mining companies

that previously exploited this ore established cobalt-processing factories in the country and thus generated more jobs.

Some have argued that Chinese enterprises tend to employ imported labour from China because of their skills, docility and hard-working diligence besides cultural proximity, and that, therefore, it does not contribute to job creation in Africa as expected (Shen, 2013). Chinese FDI into Africa is indeed accompanied by labour imports. However, through recent research based on 35 firm interviews in Africa and China, Shen (2013) concluded that the general ratio of Chinese versus local hiring in the manufacturing sector is around 1:15. In addition, the ratio has been changing in favour of local hiring as more local workers get trained. Shen found no evidence of excessive importation of Chinese labour. For instance, besides the earlier mentioned example of automobile manufacturing in Ethiopia, the



Zambia ranks as one of the highest for FDI flows from China's state-owned enterprises

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Countries like Angola which have been blighted by civil war attract investors from China to assist with the rebuilding of infrastructure

Chinese SOEs building the Northern and Eastern Ring Road sections in Nairobi employed 1,400 workers, a mere 50 of whom were Chinese.

A critical claim is that local workers only get low- or semi-skilled operational jobs, while the high-skilled and managerial jobs are restricted to Chinese employees. It is also alleged that job training and technology transfer are disappointing because workforce training, although common, is mostly limited to low-skilled levels. Although this type of training is important as many new recruits do need to start from the very basics, it is true that most critical technical and managerial positions are held by Chinese staff, due partly to

cultural and language differences (Shen, 2013). Another reason is that Chinese non-SOEs are often family firms, in which the managerial positions are mostly occupied by family members.

The location and quality of job creation is more important for long-term economic growth in Africa. Recently, Chinese investors have become increasingly focused on job training and technology transfer. A good example is the Mombasa-Nairobi Standard Gauge Railway in Kenya with the China Road and Bridge Corporation as the prime contractor. Tracklaying was completed in 2016 and the railway was commissioned in 2017. The project employed 25,000 Kenyans, more



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than 16,000 of whom have been trained since the start of their careers in the project and 2,700 Kenyans have become qualified lab technicians, surveyors or mechanics. Moreover, the company worked with Kenyan training institutions to establish training centres for railway technology and operations. The project thus brought to Kenya not only the railway hardware but also advanced knowledge and skills for the construction and operation of the railway system.

A third issue for Chinese FDI is related to the working condition in Chinese-established factories in Africa. Although working conditions may vary across such factories, they are in general not satisfactory.

Some factories were reported to force employees to work unpaid overtime and/or retaliate against unionized employees seeking better treatment. Most African countries' labour laws are based on those of their former colonizers and are often stricter than China's labour laws. There is, indeed, a need for Chinese companies to better understand and respect local laws and regulations concerning labour rights as well as workers' cultures and religions.

Finally, some Chinese firms pay insufficient attention to corporate social responsibility (CSR) and environmental protection. Chinese companies, especially central government SOEs, have often faced relatively little pressure to act in a transparent or environmentally responsible way back home. They tended to replicate this in Africa at first and faced the fall out. In Ghana, the Bui National Park will be

The location and quality of job creation is more important for long-term economic growth in Africa. Recently, Chinese investors have indeed become increasingly focused on job training and technology transfer

significantly affected by the Bui Dam since 21% of the park will be submerged. The dam could also change the flow regime of the river and harm downstream habitats. Furthermore, the Bui dam project requires the forced relocation of 1,216 people. So as not to slow down the construction of the dam, the Bui Power Authority has opted for a quick resettlement process, generating some negative impacts on local communities. As indicated by this example, the reputation of Chinese companies operating in Africa is mixed. While they have won respect for their investments and efficiency, they have also faced challenges when and where the focus on expedience and profit overlooked the interests of local communities.

Recently, however, Chinese firms have started changing their attitude towards corporate and social responsibility (CSR) and environmental matters to protect their brand reputation in Africa. For instance, Sinohydro invested USD900 million in 30 projects in Angola including hydropower, hospitals, schools and

public transportation. It has trained and employed over 8,200 local workers. In 2011, it sponsored the establishment of water facilities for schools in Nairobi when Kenya had its worst drought in six decades. The Mombasa–Nairobi Standard Gauge Railway, which passes through the Tsavo National Park at ground level with consequential risk of collisions with wildlife built six viaducts at regular intervals to allow for the safe passage of wildlife. The remainder of the railway section through the park is elevated on high embankments to further reduce collision risks.

In 2015, the China International Trust and Investment Corporation (CITIC) collaborated with International Finance Corporation (IFC) and announced the launch of a USD300 million investment platform to develop affordable housing and provide 30,000 African homes over the next five years. It started in Kenya, Nigeria and Rwanda and next expanded to other Sub-Saharan countries. Experiencing the highest rate of urbanization in the world with approximately 40,000 people migrating to cities every day, Africa faces serious urban housing shortages. Kenya's shortage, for example, is estimated at 2 million units. Nigeria needs 17 million more units. UN-Habitat reports that in countries like Nigeria and Sudan over half of the urban population lives in slums, partly because few local developers possess the technical and financial strength to construct large-scale low-cost projects but also because the low-cost housing market is less profitable than that for higher income groups.

The 30,000 new homes planned by IFC and CITIC could be an important contribution. CITIC was selected since it has recently completed a 200,000-unit housing program in Kilamba Kiayi, a new town in Angola. In a mere 54 months, CITIC built 710 residential buildings in addition to 41 schools and kindergartens, 246 shops, a power substation, water purifying and sewage treatment plants, and roads and traffic lights. Nonetheless, the new town is almost a ghost city with the majority of the apartments unsold, as their price is prohibitive to most Angolans. Such ill-conceived projects reveal that Chinese firms should engage more with local authorities and civil society to better understand and respond to local needs.

Despite noteworthy recent achievements by Chinese FDI into Africa important challenges remain: (1) the strategic importance of CSR is not always acknowledged both in Chinese headquarters and their subsidiaries in Africa and the CSR department is often marginalized; (2) companies are less motivated

to take on social responsibility when weighted against earning more profits; (3) some Chinese managers are reluctant to engage with civil society, media and local communities and insufficiently observe the importance of the participation of local stakeholders; and (4) some firms tend to invest in countries with lax environmental and social regulations to reduce compliance costs in the short term, but this increases business risks in the longer term.

One possible strategy is for Western countries and China to cooperate in improving the development approach of Chinese FDIs in Africa. Specifically, they could collaborate to enhance Chinese investors' CSR capacity, particularly by providing training to Chinese managers. Chinese investors should be given more involvement in discussions on CSR-related international standards. Cross-country public and private partnerships on project-based cooperation could be an entry point for this.

While some praise China's role in filling financial and technological gaps in Africa, others question the motives behind these Chinese investments and their impacts, and portray China as the new colonizer on the African continent

Conclusions

China's relationship with Africa has changed from one driven by Mao Zedong's ideology that sought to promote and support African countries' anti-colonial movements towards one that is increasingly based on international trade, official aid programmes and, more recently, on Chinese FDI into Africa. The growing level of Chinese FDI into Africa has attracted the world's attention, but viewpoints on these investment flows are starkly polarized. While some praise China's role in filling financial and technological gaps in Africa, others question the motives behind these investments and their impacts, portraying China as the new colonizer on the African continent. This study used recent Chinese outward FDI data to analyse the complexity of Chinese investments in Africa through a micro-, firm-level perspective.



In Ghana, the Bui National Park has been affected by the Chinese-backed construction of the Bui dam which has left the park under water and forced the relocation of communities

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China's FDI in Africa has become more complex and diverse in terms of firm ownership, source and recipient regions and economic sectors. Empirical studies on Chinese FDI into Africa tend to overstress central government SOEs' investments, particularly those in energy and natural resources and infrastructure. Chinese local government SOEs and non-SOEs are rarely influenced by China's central government policy guidance and play an increasingly important investment source role, especially in manufacturing.

China's investment activities in Africa are still in their early stages and it is therefore difficult to fully comprehend their longer-term impacts. Consequently, Chinese FDI into Africa is becoming more diverse and complex, it is too early to decide whether the overall balance of these investments in African countries is positive or not. On the one hand, referring to Chinese investments in Africa as "neo-colonialism" is not correct as Chinese enterprises have improved the investment environment, promoted people's living standards and

pushed forward long-term local economic development in Africa by investing in infrastructure, introducing new industries and creating employment.

On the other hand, Chinese enterprises have, at times rightfully, been criticized for not adhering to social and environmental matters although Chinese firms appear to be changing their attitude towards CSR and environmental protection, if only to defend their brand image in Africa. In response to the dwindling global demand for Chinese exports after the 2008 financial crisis and the slow-down in its economic growth, China has accelerated its pace of outward investments, particularly through building networks connecting China to Asia, Africa and Europe. This is likely to not only facilitate the global integration of the African economy, but also to push forward infrastructure improvements and economic growth. Chinese FDI flows are therefore expected to play an even more important role in Africa in the foreseeable future.

Part B | Chapter 1

The Impact of FDI on Income Inequality in Africa

By Rupinder Kaur, Ronald Wall
and Jan Fransen

Inequality tends to be higher in urban rather than in rural areas due in part
to rural-urban migration
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The Meskel festival in Lalibela. Ethiopia has the fastest growing economy in Africa and also the lowest level of income equality

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FDI is an agent of global economic integration (Mah, 2003) and many developing economies have adopted FDI liberalisation policies to help facilitate its benefits. However, despite increasing investments in developing economies, poverty and income inequality persist and remain a major challenge. The relationship between FDI and income inequality is often divided into the Neoclassical and Dependency Theories. The former optimistically argues that FDI stimulates higher economic growth and, hence, lower inequality. The latter states that FDI has negative effects on economic growth and leads to higher income inequality (Firebaugh and Beck, 1994). Not many studies exist

that have empirically established a link between FDI and inequality (Basu and Guariglia, 2007; Tsai, 1995; Wu and Hsu, 2012). Therefore, this study seeks to explore this relationship within the context of African countries. Given the persistent inequality in Africa, the Dependency Theory is the starting point and the current study seeks to identify the types of FDI that reduce income inequality in African countries so that policy recommendations can be made from its findings.

Neoclassical scholars have argued that FDI fosters economic growth and reduces inequality in host countries (Mundell, 1957). They theorize that, apart from filling the resources gap, FDI promotes

higher economic growth and development through technology diffusion, development of human capital and management skills and access to export markets (Tsai, 1995; Li and Liu, 2004). Dependency scholars, on the other hand, argue that economic reliance on the advanced economies - implicit to many types of FDI - may have negative social and economic impacts on developing countries and can in the long run result in increasing inequality between highly skilled and low-skilled workers (Firebaugh and Beck, 1994).

Recent studies, however, have suggested that the impact of FDI on income inequality is determined by local conditions in the host (receiving) countries, particularly in terms of absorptive capacity, human capital, technology diffusion and the quality of its institutions (Schneider and Soskice, 2009; Wu and Hsu, 2012). In this study, absorptive capacity has been measured by the quality and production of electricity, air transport, mobile phone subscriptions and international internet bandwidth. Human capital is measured by the enrolment rate in tertiary education and the percentage of internet users. The indicators associated with local innovation and levels of technology are used as a proxy for technology diffusion. Lastly, institutional quality includes public and private institutions.

Limited literature exists that links FDI and income distribution and the research available reveals mixed results, ranging from the overall reduction of inequality (Herzer and Nunnenkamp, 2013) to an insignificant impact (Sylwester, 2005) or to an overall increase (Mahutga and Bandelj, 2008). More recent studies include local factors as moderating variables between FDI and inequality (Wu and Hsu, 2012). Since these studies differ in regional focus, the factors included in their analysis and methodologies used, impede comparison. Also, most studies analyse total FDI, while impacts are likely to differ between investment sectors (Wang and Blomstrom, 1992). Moreover, only a few studies focus on Africa and this study attempts to gain a deeper understanding of the relationship between sectoral FDI and income inequality in African countries.

The geography of income inequality and FDI in Africa

African countries have some of the highest income inequalities in the world, which is particularly evident for the period 2006-2014 (Map 1.1) (Online Appendix, Part B, 1.8). This study shows that the Southern African region, and the Republic of South Africa in particular, has the highest level of inequality in

Africa. Nonetheless, Southern Africa has shown the fastest reduction in the income inequality growth rate (-2%), followed by Eastern Africa (-1.2 %) and Western Africa (-1.1 %). The negative growth rate of the Gini coefficient implies a declining growth of inequality, which in turn may lead to absolute decline in actual inequality in the long run, since it takes a long time to reflect a change in the value of the Gini coefficient.

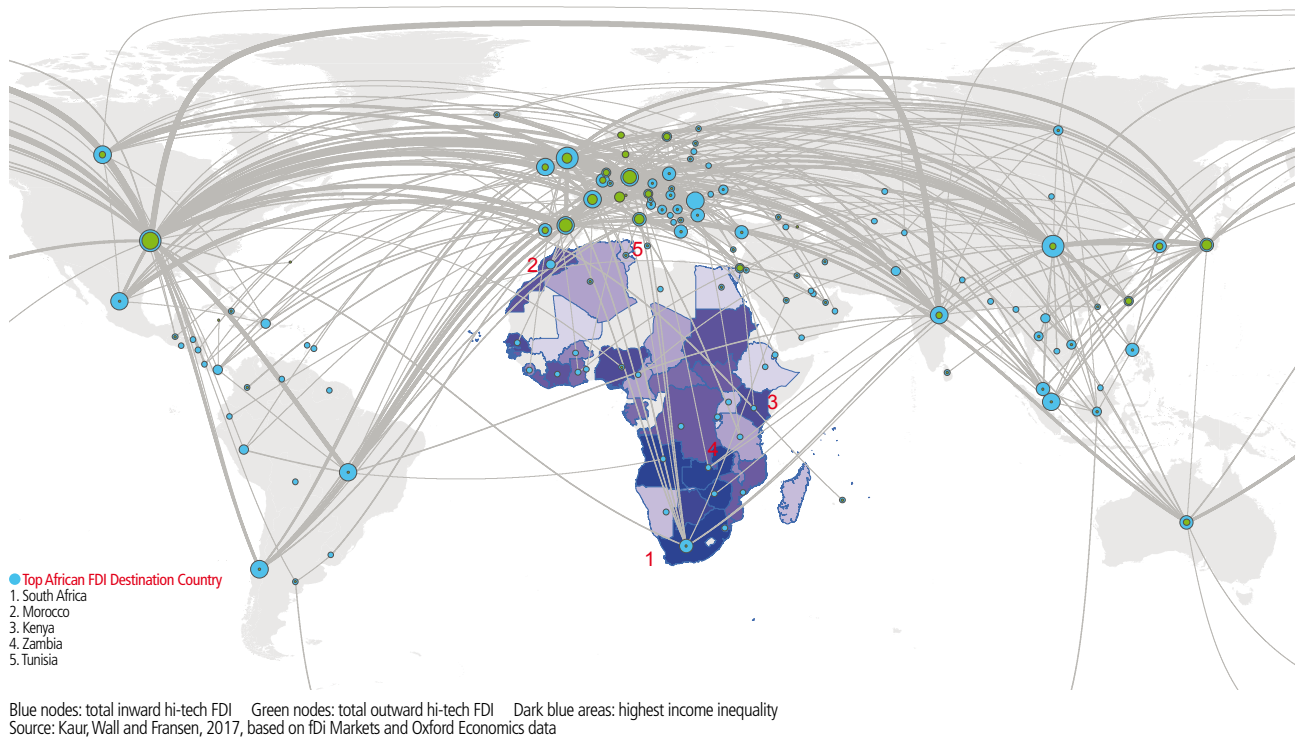
Conversely, Northern and Central Africa, with their lower levels of income inequality, have experienced an increase in their income inequality rate over the 2006-2014 period. Our study confirms the results from the 2016 *Poverty Rising in Africa* report, which states that half of the countries studied have reported a decline in inequality, while the other half have shown increases. Southern African countries are the most unequal in the world, while other African countries have inequality levels comparable to those of countries with similar levels of development (World Bank, 2016). Generally, inequality tends to be higher in urban rather than in rural areas due in part to such factors as the urbanization of poverty through rural-urban migration (The World Bank, 2010). Inequality manifests itself in the form of urban and peri-urban informal settlements (slums) and urban spatial segregation but also in perhaps less visible unemployment, lack of

African countries have some of the highest income inequalities in the world, which is particularly evident for the period 2006-2014

access to basic services or exclusion from educational and health infrastructure. Higher income inequality lowers the poverty-reducing ability of growth and leads to further segregated concentration of wealth (African Development Bank Group, 2017). Economic growth in Africa has not been inclusive, with a large number of people living in extreme poverty characterized by high levels of income inequality (UNECA, 2016).

At the country level, Ethiopia has the fastest growing economy in Africa while revealing the lowest level of income inequality (0.300), followed by Mali (0.307), Burundi (0.313), Egypt (0.314) and Namibia (0.333). The five countries with the highest average income inequality are all in the Southern Africa region:

Map 1.1. The level of income inequality and average inward hi-tech FDI in Africa (2006-2014)



Zambia (0.744), South Africa (0.650), Angola (0.583), Zimbabwe (0.559) and Botswana (0.510). Inequality is lower in Northern African countries than in the middle income countries of the world (UN-Habitat, 2010).

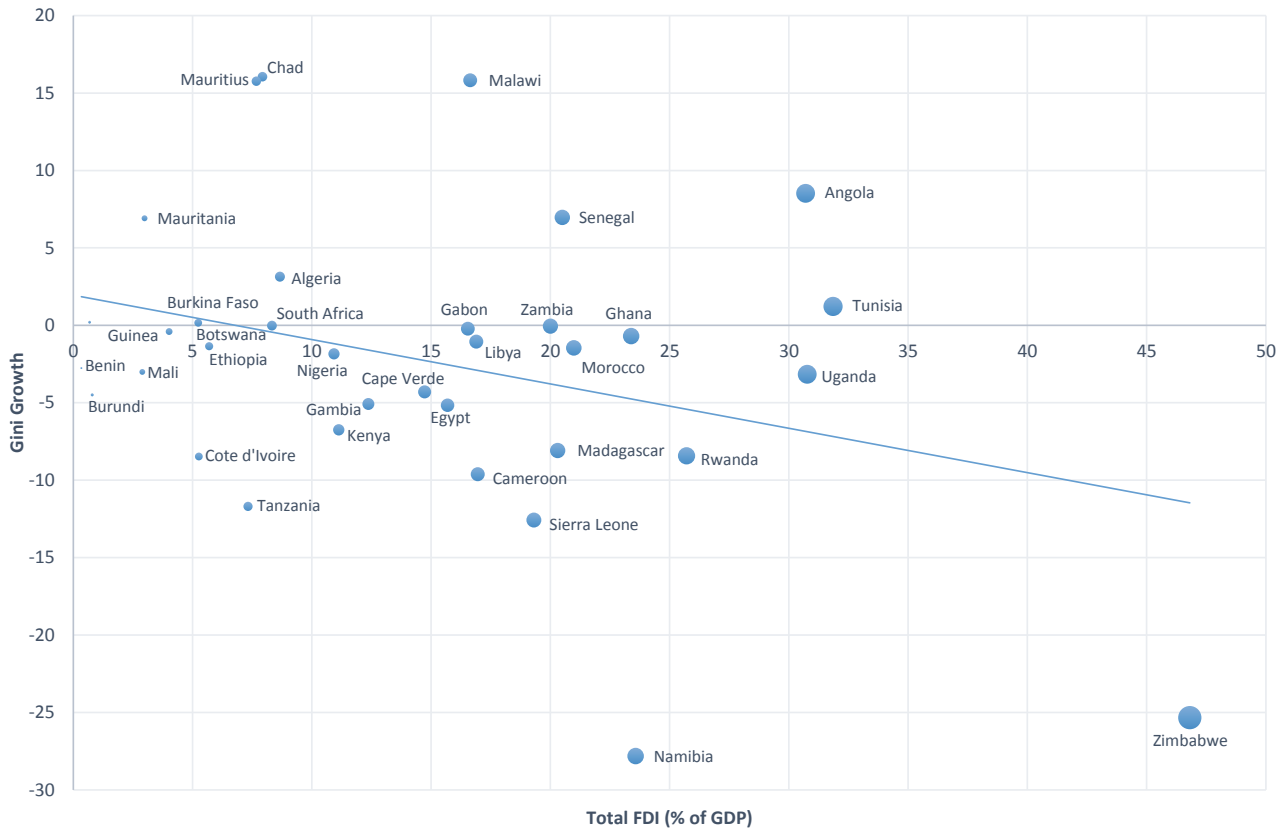
Similarly, despite its relatively high level of economic development, South Africa maintains a highly unequal society, which can be mainly attributed to its current political predicament and its long history of oppression and apartheid (World Bank, 2016). Zimbabwe, one of the most unequal countries in Africa, has shown the largest decline in income inequality, followed by Namibia. The map also illustrates the network of hi-tech FDI between countries of the world, which will be shown (further in the chapter) to significantly reduce income inequality when mediated through absorptive capacity and other factors. As seen on the map, the main recipients of global hi-tech FDI in this period have been South Africa, Morocco, Kenya, Zambia and Tunisia.

The analysis of sectoral FDI (Online Appendix, Part B, 1.7) shows an increase in FDI in the period 2006-2008, followed by a decline that was most likely caused by the global financial crisis. Online Appendix 1.7 (Part B) shows that manufacturing was the leading

Zimbabwe, one of the most unequal countries in Africa, has shown the largest decline in income inequality, followed by Namibia

sector in terms of inward FDI, largely concentrated in Egypt, Nigeria, Libya, Tunisia, South Africa, Morocco, Algeria and Ghana. Resources was the second largest FDI sector, with countries such as Angola, Nigeria, Egypt, South Africa and Uganda the major recipients of this type of FDI. The services sector is the third largest with a large share of FDI concentrated in Nigeria, Morocco, Egypt, South Africa and Tunisia respectively. Lastly, the hi-tech sector proved to be the smallest sector in terms of FDI attraction and is concentrated in only a few countries i.e. Egypt, South Africa, Algeria, Morocco, Nigeria and Kenya. These are amongst the more developed economies in Africa and receive large shares of FDI across all sectors. Though South Africa receives high volumes of FDI, it is also evident in the case study on Johannesburg in Part C of

Figure 1.1. The growth of the Gini Coefficient and total FDI as % of GDP in Africa (2006-2014)



Source: Kaur, Wall and Fransen 2017, based on fDi Markets and Oxford Economics

this report, that these investments are concentrated in a few select locations within the city, reinforcing spatial segregation and high income inequality.

The relationship between FDI and income inequality

Our research revealed the interesting finding that FDI leads to an increase in income inequality in host countries but, when controlled for other local factors such as absorptive capacity, human capital, the level of technology and the quality of institutions, FDI reduces income inequality (see Table 1.1). This clearly demonstrates that the impact of FDI on host countries is determined by their local conditions. In addition, if a country increases its human capital levels (measured by proxy of tertiary education), it can be expected that income inequality will decrease. This makes sense because the more people benefit from higher education, the more likely they are to access better jobs and incomes, stimulate economic spill overs and

subsequently decrease inequality. Education improves both urban productivity and the capacity to innovate which, in turn, delivers higher growth. Therefore, the level of education not only improves incomes of individuals but also has a long-term effect on the local economy.

The findings also indicate that a higher level of technology and innovation (although with a lesser degree of significance) is likely to spur income inequality, because advanced technology tends to replace workers and reduce employment. However, although insignificant in this model, an interaction between total FDI and local technology would reduce income inequality (seen by the negative sign) through knowledge transfer. Furthermore, the interaction between FDI and technology reveals stronger results in the case of different sectors of FDI.

These initial findings indicate that if a host country has improved its levels of local technology then foreign technology in terms of FDI diffusion is more readily absorbed. This, in turn, can give rise to new related

economic activities and economic diversification in the host country. This strengthens the local economy by increasing productivity and generating jobs and, by extension, reduces income inequality.

It is important to realize that FDI also has an indirect relationship with income inequality, mediated by the socio-economic conditions of the host country. For instance, the Tala mobile credit app operating in Kenya and Tanzania provides customized financial services and disburses loans directly to a customer's mobile phone. The majority of its customers are small- and micro-entrepreneurs requiring small loans to finance their businesses.

Our study also confirmed that a better institutional environment is likely to reduce income inequality as it protects investors and labourers and creates a more conducive business environment. On the other hand, if institutions favour protection of foreign capital and

It is important to realize that FDI also has an indirect relationship with income inequality, mediated by the socio-economic conditions of the host country

technology, inequality can increase through obstructed technology diffusion, making it more difficult for the host country to absorb and utilize foreign technology. This finding aligns with the argument of Morgan (2016) that modern institutions tend to facilitate the protection of investors rather than workers.

Our research also found that a higher share of trade in GDP is likely to lead to higher income inequality, as greater dependency on trade increases competition between foreign and domestic firms



The Tala mobile app disburses loans directly to users' phones in Kenya and Tanzania

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Table 1.1
The impact of sectoral FDI and other factors on equality

Variables	Equality	Equality	Equality	Equality	Equality
Total FDI share (% of GDP)	+++				
High-tech FDI share (% of GDP)		+++			
Manufacturing FDI share (%of GDP)			++		
Resource FDI share (%of GDP)				0+	
Services FDI share (%of GDP)					0+
Absorptive capacity	0+	0+	++	0+	0+
Total FDI share and absorptive capacity	+				
High-tech FDI share and absorptive capacity		+++			
Tertiary enrolment	+++	+++	0+	++	++
High-tech FDI share and tertiary enrolment		--			
Resource FDI share and tertiary enrolment				--	
Technology index	-	0-	-	-	0-
Institutions	+	+	0+	0+	0+
Total FDI share and institutions	---				
High-tech FDI share and institutions		---			
Manufacturing FDI share and institutions			--		
Resource FDI share and institutions				--	
Trade share (% of GDP)	-	0-	0-	0-	0-
Initial per capita GDP growth	0+	++	0+	0+	0+
2. Central Africa	0+	0+	0+	0+	0+
3. East Africa	0-	0-	0-	0-	0-
4. West Africa	0+	++	++	0+	+
5. Southern Africa	0-	0+	0+	0-	0+

Source: Kaur, Wall and Fransen 2017, based on fDi Markets and various additional data sources

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
-- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation

and poses a threat to the local economy. Increased competition may decrease the productivity of local firms and consequently reduce employment.

Our results show limited inter-regional differences in the relationship between FDI and income inequality in Africa. Only Western Africa has a stronger impact of FDI reducing income inequality. But results are mixed, possibly due to the huge variations within this region, where amongst the eleven West African countries only Cape Verde, Côte d'Ivoire, Nigeria, and Sierra Leone saw relative declines in income inequality.

Western Africa is the third largest recipient of FDI amongst the five African regions. Nigeria is in second position after Egypt in terms of receiving

total FDI. Nigeria is characterized by high absorptive capacity, human capital, technology levels, a good institutional environment and high FDI attraction. It receives a high value of hi-tech FDI, which is associated with lower inequality.

On the other hand, there are low-end FDI receivers. For instance, Sierra Leone, has much less absorptive capacity, human capital and technology, although it has good quality institutions. Cape Verde and Côte d'Ivoire have average absorptive capacity but better human capital and institutional quality, which has enabled them to reduce their income inequality. In the study on foreign investments in Côte d'Ivoire (see Part C), it was found that these investments generate significant

employment, increase social welfare, and promote environmental protection, while partnerships with local businesses are conducive to the transfer of competences and technical know-how. It was further shown that appropriate institutional frameworks put in place in Côte d'Ivoire were supportive. Challenges remain for administrative procedures (licenses, permits etc.), legal business matters, corruption incidence, lack of open governance, banning of certain industrial entrants, unfair competition, market monopolies, tax harassment and lack of investment promotion activities.

High-tech FDI and inequality

This study reveals that hi-tech FDI most significantly and positively affects income inequality although its impact depends on the absorptive capacity, human capital and technology level in the recipient country. Hi-tech comprises ICT (design development & testing, education and training, manufacturing, sales marketing and support), chemicals, aerospace and pharmaceuticals. It is still a relatively small sector in Africa but generates great value for foreign investors. After manufacturing, it is the second-most important FDI sector in terms of direct employment generation, i.e. five jobs per million USD invested.

Interaction between hi-tech FDI and a country's absorptive capacity is important because increased absorptive capacity enables a wider distribution of foreign investments and technologies in local economies (creating more diversification) and can lead to a more equal society. In Africa, internet and mobile data play important roles in the diffusion of knowledge to small businesses, including informal markets. For instance, ICT and mobile phone ownership enable access to business networks and education, financial services and real-time market information. This is of particular importance to empowering female entrepreneurs. The *African Economic Outlook* report (2017) states that technology-based FDI creates positive spill overs and promotes local entrepreneurship through the application of new technology to traditional services. Such technology-inspired innovations include financial services and mobile payments that make many day-to-day financial transactions cheaper and convenient. Some foreign and African firms are working with start-ups and technology platforms to promote a new generation of hi-tech entrepreneurs (African Development Bank Group, 2017; UNECA, 2017b).

Lastly, collaboration between universities and industry for research and development (R&D) facilitates innovation, improves technology levels and boosts host countries' new technology absorption. Some countries are now increasing their technology absorption capacities, such as Kenya through its Support to Technical Vocational Education and Training Project (USD41 million) which aims to boost the capacities of the faculties of engineering and applied sciences in 33 Technical Training Institutes (TTIs). Another example is Zambia's Skills Development and Entrepreneurship Project, which specifically targets women and youth for skills and entrepreneurship development. Eritrea, Sudan and Togo have initiated similar programmes to promote skills and entrepreneurship towards more employment and equality (African Development Bank, 2015).

Furthermore, FDI is likely to increase income inequality in countries with higher human capital because it widens the income gap between multinationals and local firms, due to different salary scales, skills and education levels (Lin et al., 2013). Similarly, hi-tech FDI into countries with higher levels of local technology will increase income inequality in the host country because countries with high levels

In Africa, internet and mobile data play important roles in the diffusion of knowledge to small businesses, including informal markets

of technology and innovation tend to attract hi-tech FDI in knowledge-based activities, which generates only a small number of jobs for highly skilled workers. This further widens the income gap between skilled and unskilled workers leading to higher income inequality. The quality of institutions also influences the actual impact of hi-tech FDI on income inequality. Higher quality institutions tend to reduce income inequality by protecting national intellectual property rights, improving the investment environment and encouraging stronger auditing. These attributes promote higher productivity, protect workers from exploitation and reduce corruption. They also encourage fair justice and the ethical behaviour of firms. On the other hand, the inflow of hi-tech FDI into countries with improved institutions can also result in



Asmara City, Eritrea. The government has initiated programmes to target women and youth for skills and entrepreneurship development

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higher income inequality if these institutions overly favour protecting foreign capital and their technologies because that hinders technology diffusion and maintains the technology gap between foreign and host country firms. This clearly poses a threat to local firms as they have to compete with foreign firms.

Northern African countries (e.g. Algeria, Egypt and Morocco) and the Republic of South Africa have received the greatest value of hi-tech FDI since they have superior absorptive capacity, human capital, technology, innovation and quality of institutions. There is a concentration of hi-tech FDI in the Nile River corridor (Cairo) and the Gauteng Province corridor (Johannesburg) which strongly correlates with the location of manufacturing FDI

there. That is not surprising since hi-tech FDI in Africa is mainly geared towards manufacturing and innovation hubs (see Part A, Chapter 1). All these factors contribute to lower income inequality, except for South Africa (Online Appendix, Part B, 1.5) where societal polarization and segmentation in combination with its apartheid history, continues to stimulate high levels of income inequality.

Manufacturing FDI and inequality

Between 2006 and 2014, the manufacturing sector received the largest share of inward FDI. Our study indicates that manufacturing FDI significantly reduces income inequality (Table 1.1). It also generates

the largest number of jobs i.e. six jobs per million USD invested. Manufacturing further has a great potential for backward and forward linkages with other sectors, particularly agriculture and hi-tech. An increase in FDI alongside backward and forward linkages has the potential to improve macro-economic conditions through structural transformation and economic diversification. These tend to generate new economic activities and employment opportunities for low-skilled workers, which in turn leads to lower income inequality.

According to the OECD's *African Economic Outlook* (2017), the more diversified African economies have performed better than the less diversified ones. Many African economies have become more diversified and resilient, particularly to external commodity shocks, when compared to a decade ago. The share of industrial and service sectors has shown a considerable increase in economic growth, mainly driven by the IT and telecommunications revolution (African Development Bank Group, 2017). Moving to an export-oriented economy requires a shift in industrial structure, and the manufacturing sector can play a significant role in restructuring African economies and promoting industrialization. In particular developing the agricultural sector and agro-based manufacturing will improve value chains and employ large numbers of low-skilled workers and, thereby lower income inequality (African Development Bank Group, 2017; UNECA, 2017b). Declines in the share of the agriculture labour force, accompanied by small increases in manufacturing and services, indicate that a structural transformation is now taking place in Africa (African Development Bank Group, 2017).

As with hi-tech, absorptive capacity is also crucial to manufacturing and its role in reducing income inequality because this sector requires well-developed physical infrastructure, ranging from roads and railways to a sufficient supply and quality of electricity. In addition, a good ICT infrastructure (mobile telephones and internet connectivity) facilitates communication, provides improved access to information, helps in marketing, creates networks and helps establish business relations, which are all important for the growth and productivity of the manufacturing sector. For instance, Pedigree, based in Tanzania, develops custom software for mobile finance apps. It facilitated the establishment of a movement which helps corporations and

governments protect their brands (against fake and harmful products) and safeguards regulatory systems. It also increases human safety by protecting medicines and agricultural pesticides and seeds (African Development Bank Group, 2017).

Countries with higher levels of technology attract FDI in advanced manufacturing activities, which are technology driven and require fewer workers in specific and skilled jobs. Under these conditions, manufacturing FDI increases income inequality. Similarly, the inflow of manufacturing FDI in countries with better quality institutions and increasing populations also leads to higher income inequality, as explained earlier.

From a regional perspective, manufacturing FDI contributes most to lowering income inequality in Western Africa. However, the top destinations for manufacturing FDI are Egypt, Libya, Nigeria, South Africa and Tunisia (Online Appendix, Part B, 1.6). These countries have experienced a decline in income inequality because of favourable factors i.e. a strong local economy, high values of inward FDI, and high levels of absorptive capacity, human capital, technology, and conducive institutional environments. The interaction of these factors results in a better macroeconomic environment which, arguably improves income distribution by generating employment and reducing poverty, which in turn results in lower income inequality.

Resources and services FDI and inequality

In Africa, the resources sector is the second-largest recipient of FDI, accounting for 34% of total FDI. The relationship between resources FDI and income inequality is not statistically significant (Table 1.1). A similar finding has been reported in Part A of this report that FDI into the resources sector is statistically insignificant and has a negative impact on the per capita GNI in African countries. One of the major reasons is that it only generates two direct jobs per USD million of FDI, compared to five and six jobs per million in the hi-tech and manufacturing sectors, respectively (Online Appendix, Part B, 1.2). FDI into the resources sector in Africa is extractive in nature and mainly associated with the export of raw material rather than local value addition. The findings show that an increase in human capital provides skilled workers to the services sector. However, the interaction between services FDI and tertiary education tends to

increase income inequality because the services sector requires skilled workers with a relatively higher level of education, thereby generating only two direct jobs per USD million of FDI.

Policy and research recommendations

Since the impact of FDI on income inequality is mediated by absorptive capacity, policies should focus on improving that capacity. According to FDI literature, the quality of a country's human capital, institutions and infrastructure are factors in attracting and reaping the benefits of FDI. Therefore, it is

African countries should specifically target hi-tech and manufacturing FDI, as these have the most potential for reducing income inequality. Growth in the hi-tech sector may also lead to higher levels of technology and innovation, give rise to new economic activities and promote growth in other sectors

important for African countries to invest in these fields. Countries should also further develop their ICT infrastructure, as this is the backbone of the hi-tech sector and increases productivity.

It would be useful if more research was done on the mediating effects of absorptive capacity. This study has focused on country-level analysis, while city-level analysis would be more appropriate. However, city-level data is generally very sparse and typically incomparable since it is not standardized. Advanced data collection at a city and country level would greatly aid research. Regional, national and municipal policies should be employed to ensure the development of adequate data. More detailed analysis based on new data would offer higher depth to the findings and consequent policy recommendations.

African countries should specifically target hi-tech and manufacturing FDI, as these have the most potential for reducing income inequality. Growth in the hi-tech sector may also lead to higher levels of technology and innovation, give rise to new

economic activities and promote growth in other sectors. Boosting the growth of the manufacturing sector, as the largest recipient of FDI, has the potential of restructuring African economies and boosting local economies through backward-forward linkages with local firms.

Growth of the manufacturing sector is crucial for countries. It is critical for integration into the world economy, it plays a significant role in structural transformation and industrialization, and manufacturing can provide strong backward linkages and generate significant numbers of jobs within various sectors. The agricultural sector, for instance, through agro-businesses and food processing can generate large employment opportunities for low- and no-skill workers. Similarly, the manufacturing sector's linkages with the real estate, finance and retail sectors can generate employment growth in the services sector.

Unsurprisingly, human capital significantly reduces the odds of income inequality and African countries should focus on education and skill development to achieve higher levels of skills among their labour pools. A large share of Africa's population is young and unemployed. Education in combination with FDI is the primary tool for long-term youth unemployment reduction and raising the level of local technology. Therefore, countries should invest in higher education, R&D and innovation to diversify their economies and increase their productivity.

Improved auditing and reporting standards will reduce ambivalence and strengthen the mediating role of institutions. This is particularly important where state social democratic parties and trade unions are replaced by market-oriented institutions such as financial markets and multinational firms. Significant illicit financial leakages such as bribery and corruption are also a serious concern but better institutions and greater transparency can help alleviate this problem.

The factors that determine the effect of FDI on income inequality vary across sectors, which has important implications for research and policy. As shown, FDI into hi-tech and manufacturing leads to lower income inequality if host countries have a higher absorptive capacity, whereas FDI into resources and services sectors does not appear to reduce income inequality in the presence of higher absorptive capacity. A better understanding of these findings deserves more research.

Part B | Chapter 2

The Impact of Foreign Direct Investment on Employment in Africa

By Ronald Wall, Poonam Mehta
and Rupinder Kaur







Agriculture is still the dominant sector for employment in Africa

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Over the past decade, the flow of FDI towards African countries has created economic growth opportunities and has positively affected inclusive development. This study explores whether FDI has been effective in creating employment in Africa based on data for 2003-2014. The study examines to what extent different aspects of overall FDI (greenfield FDI, FDI stock and FDI flows) and different sectors of FDI affect overall employment and sectoral employment (agriculture, services and manufacturing) in Africa.

In recent decades, FDI, as one of the key drivers of globalization, has triggered an increasing number of countries to adopt liberalization policies and stimulate free trade. Although many advanced economies perceive globalization as a threat due to its adverse impacts on traditional jobs and their relocation to other parts of the world, most

developing economies see it as a contributor to employment generation and poverty reduction (Jenkins, 2006). However, the debate on the impact of FDI on employment in Africa remains inconclusive.

Africa is home to some of the fastest growing economies in the world (Dicken, 2011; ILO, 2016). With the decrease in foreign aid, FDI is now one of Africa's key determinants to fill the resource gap, generate growth and alleviate poverty (Asiedu, 2004). Whereas Africa was predominantly engaged in agriculture in the past, globalization and urbanization have started to structurally transform many of its countries' economies (The World Bank, 2013; Szirmai, 2013). However, notwithstanding economic growth and positive structural change, most African countries experience low wage levels, high unemployment rates and significant

dependency on the informal sector. Therefore, it is interesting to explore whether FDI significantly affects overall and different sectors of employment.

In past studies, FDI is said to generate employment in two ways: direct employment within multinational enterprises (MNEs) and indirect employment through backward and forward linkages of MNEs in host countries (Asiedu, 2004). Other studies argue that, although Africa's growth rate is currently higher than the world average, this is not transformative as it is neither generating enough jobs nor creating adequate infrastructure (UNCTAD, 2014). Consequently, Africa is extremely dependent on informal economic development (Chen, 2012) and, in its low-income countries, the informal economy is responsible for about 50% of national output, about 60% of employment and 90% of new jobs (Benjamin et al., 2015).

A large proportion of workers are engaged in informal activities particularly in the resources sector and small-scale manufacturing units, as well as low-skilled jobs in the services sector. High levels of informality are undesirable, not only because they

In past studies, FDI is said to generate employment in two ways: direct employment within MNEs and indirect employment through backward and forward linkages of MNEs in host countries

undermine human dignity through low wages and poor working conditions, but also because of the loss of fiscal revenue and the promotion of unfair competition. Having said that, without informality as a survival strategy, a lot of Africans would be even worse off. The creation of employment in the formal sector in large numbers is of the utmost importance to Africa and FDI is considered as a vehicle for this.

Quantity of employment

The total number of employed Africans has been rising steadily but so have overall populations. In absolute numbers, Nigeria accounts for the highest number of employed, followed in descending order by Ethiopia, the DR of Congo, Egypt and Tanzania. However, most African countries are characterized by

low employment-to-population ratios. Countries such as Ethiopia, the DR of Congo and Tanzania fare well in total employment and also sport higher employment-to-population ratios, while Nigeria and Egypt are among the countries with low ratios (see Online Appendix, Part B, 2.15).

In terms of direct employment created by greenfield FDI, this study reveals that the highest number of investment-generated jobs has been in Egypt, followed by Morocco, South Africa, Nigeria and Tunisia. The lowest values are found in Mauritania, Guinea, Benin, Central African Republic, Eritrea and Somalia. In terms of sectoral employment, Part A of this report shows that the hi-tech sector, which is the smallest sector in terms of FDI attraction, has the fastest growing FDI-generated employment, followed by manufacturing.

Quality of employment

The International Labour Organization (ILO) suggests several indicators to measure the quality of employment, which have been used in this study. These include the proportion of unremunerated workers or contributing family workers in total employment (employment vulnerability rate); labour productivity growth; and female labour force participation rate. Country-level analysis shows that Equatorial Guinea had the highest employment quality index in 2014, followed by Botswana, Gabon, Mauritius, Namibia, Rwanda and South Africa. Egypt, Somalia, and Sudan perform poorly in terms of the quality of employment. Countries with a higher value of inward FDI are not better performers in terms of the quality of employment, except for South Africa (see Online Appendix, Part B, 2.15). This is especially true for the Northern African countries Egypt, Libya and Tunisia, as well as for Mozambique, which are the largest recipients of FDI. In addition, a large part of the labour force in Africa is employed in the informal sector, characterized by low skills and low pay in unhealthy working conditions. Nine out of 10 workers in Africa, particularly youth and women, are informal workers (UNECA, 2016).

Africa's employment composition by sector reveals that agriculture is still the dominant sector, followed by services and manufacturing (see Online Appendix Part B, 2.14). Over the 2003-2014 period, the sectoral composition of employment remained unchanged for manufacturing at 11%, the share of agriculture declined from 58% to 53%, while the services sector rose from 31% to 36%. The number of jobs created by

greenfield FDI in Africa varies across sectors. From the regional perspective, greenfield FDI created relatively more jobs in Central Africa, followed by Eastern and Southern Africa and Northern and Western Africa.

The impact of FDI on total employment in Africa

The first part of our analysis explored the impacts of three aspects of FDI - greenfield FDI, FDI flows and FDI stock - on total employment and on the main employment sectors in Africa (see Table 2.1). The first column shows greenfield FDI. That is, investments into new projects, and excludes mergers and acquisitions. The second column shows the degree to which total FDI (the net inflow of all forms of FDI) impacts differently on total employment. The third column explores FDI stock (cumulative historical FDI) to indicate its impact on total employment. These different forms of FDI are included in the statistical models as a robustness check. Table 2.1 reveals that total greenfield FDI does not have a significant impact on total employment when controlled by other indicators e.g. trade openness. A possible reason is that in the case of greenfield FDI the firms neither create enough employment spill-over nor transfer adequate technology and skills to employees in host countries. In the case of Africa, a large share of greenfield FDI is targeted at the resources sector, which is strongly associated with the extractive industries. FDI in these industries, does not generally lead to significant employment creation and technology transfer (Asiedu, 2006a).

The Human Development Index (HDI), which is comprised of GDP, life expectancy and education, has a positive and very significant effect on increasing employment levels and shows that increased levels of wealth, longevity and learning contribute to increasing levels of employment. Higher GDP positively affects employment in several ways, because it also serves as a determinant of FDI which, in turn, influences positively the number of collaborative ties between foreign firms and local suppliers and therefore employment generation in host countries (Amendolagine et al., 2013). In addition, education proved to be a significant factor contributing to higher employment. As indicated in the case study on Kigali in Part C, Rwanda has improved its FDI investment through administrative and institutional reforms but foreign investors still experience a lack of human resources there (Mutebi, 2018). On the other hand, the size of the working population (age 15 to 64), does not appear to have any

Table 2.1.
Impact of greenfield FDI, FDI flows and FDI stock on total employment

Variables	Total Employment (Greenfield FDI)	Total Employment (FDI Inflows)	Total Employment (FDI Stock)
Greenfield FDI	0+		
FDI inflows		+++	
FDI stock			+++
Human Development Index	+++	+++	+++
Working population (15-64)	0+	0+	0+
Trade openness	+++	+++	+++
Percentage of mobile phone subscribers	+++	+++	+++
Trade openness and percentage of mobile phone subscribers	---	---	---
International Country Risk Guide	---	---	---

Source: Wall Mehta and Kaur, 2016, based on data from different sources

- +++ Very significant and positive relation
- ++ More significant and positive relation
- + Significant and positive relation
- Very significant and negative relation
- More significant and negative relation
- Significant and negative relation
- 0+ Not significant but positive relation
- 0- Not significant but negative relation

significant impact on employment, although the sign is positive. Trade openness, a measure of how open a country is to global trade, also has a positive and indeed a very significant impact on total employment because openness enables local firms to increase their exports. When the export productivity of local firms increases, the demand for labour goes up. In addition, trade openness amplifies inward FDI through which the number of direct and indirect jobs increases.

The percentage of mobile phone subscribers also strongly influences employment. It means that the more a society is able to communicate through mobile technology, the more job opportunities are enabled. Mobile phones enable access to business information and communication, which is important in African countries, including for managing small-scale businesses in the informal sector, since access to the internet is often limited.

The next indicator in Table 2.1 is an “interaction variable”, used here to control for the impact of trade upon communication. The interaction significantly affects the model and shows that the more open to trade a country is, the more this also influences the country’s ability to communicate. The last variable, i.e. the *International Country Risk Guide*, has a very significant but negative impact on total employment in African countries. This guide

Figure 2.1. The relationship between FDI Flows and total employment (2003-2014)



Source: Wall, Mehta and Kaur, 2017, based on fDi Markets and Oxford Economics data

Mobile phones enable access to business information and communication, which is important in African countries, including for managing small-scale businesses in the informal sector, since access to the internet is often limited

includes a Political Risk Index that consists of 12 components measuring various dimensions of the political and business risk environment in African countries. Our finding implies that the higher the risks, the more this will have a negative effect on the total employment generated because instable political and business environments hinder the growth of both local and foreign firms and deter investment

into these countries. In terms of political and social stability, Rwanda has shown significant improvement and it has become one of the more politically stable and safe countries for FDI (Mutebi, 2018).

Column 2 of Table 2.1 shows the same analysis for total FDI inflows. FDI inflows prove to be highly significant in boosting total employment levels in African countries. This is arguably because these include greenfield, brownfield and M&A FDI inflows. It is in this case the more reliable investment indicator to use because arguably M&A FDI leads to more technology diffusion in host countries, through networks between foreign-owned companies and local firms. This increases the productivity of local firms, generates more employment and consequently improves the overall economy (Liu and Zou, 2008).

The third model (column 3 of Table 2.1) is similar to the previous two, but here FDI stock is used. Because FDI stock concerns total FDI inflows

aggregated over the years, it appears to have the largest impact of the three FDI categories and, as is to be expected, the control variables show similar outcomes. Figure 2.1 shows the countries that have benefitted most from FDI inflows and the leading countries with the largest number of jobs generated by investment. FDI stock has created the largest number of jobs in South Africa, Nigeria, Egypt and Morocco (see Online Appendix Part B, 2.11).

The impact of FDI on employment in agriculture

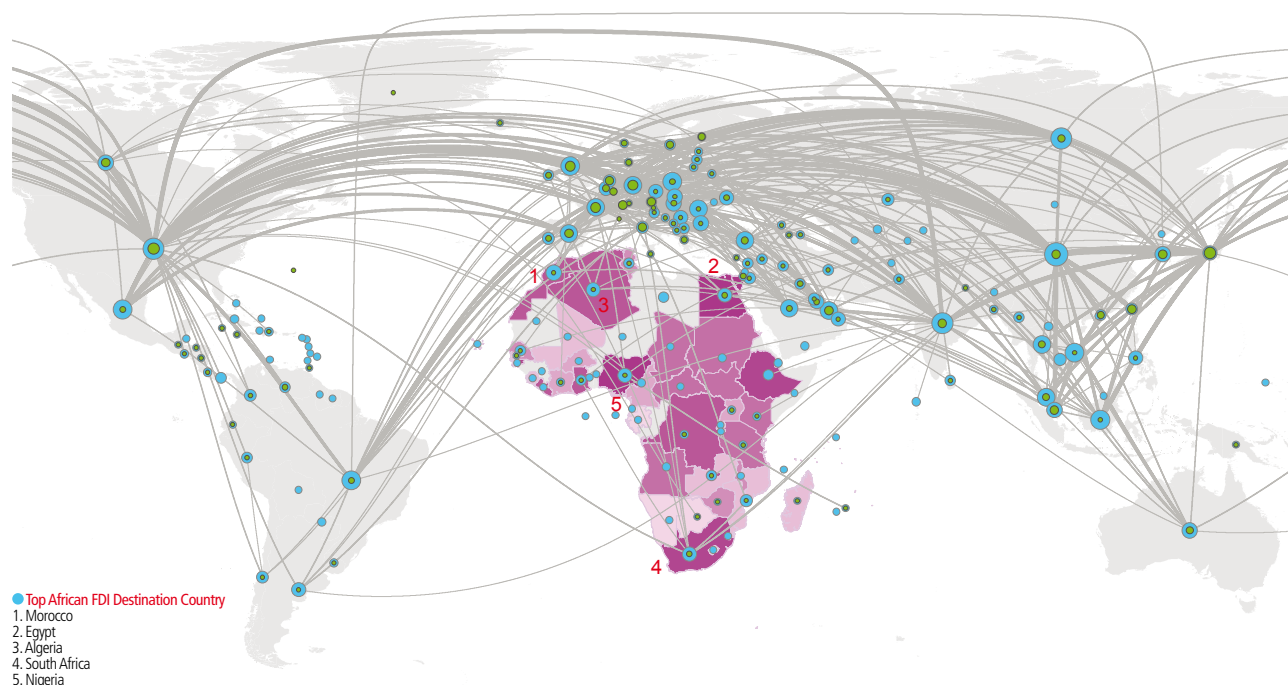
In Online Appendix Part B, 2.5, the same procedure is followed as in Table 1, but now for reviewing the impact of the three forms of FDI upon agricultural employment in African countries. From the findings, it is evident that all three models— greenfield FDI, FDI inflows and FDI stock—do not have a significant effect upon agricultural employment. This is arguably because agriculture in Africa: a) is primarily rural and subsistence in nature; b) is not high-skilled; and

c) has a weak relationship with the manufacturing and service sectors. Multinational enterprises (MNEs) are possibly not investing intensively in this sector, or their investments are hi-tech driven and are extractive in nature and therefore do not contribute to agricultural employment. In terms of food-industry related FDI, it is arguable that these investments do not boost employment because: a) MNEs focus on exporting agricultural products to markets outside Africa; b) such investments do not use labour-intensive technology; and c) they do not stimulate local farmers' productivity and employment (see also the Food Security chapter in this section of the report). Due to the lack of new and additional jobs in the agriculture sector, unemployed rural people tend to migrate towards towns and cities in search of jobs, often in the low-productivity informal sector or just add to the cohorts of urban unemployed, leading to higher informality and urban poverty. The other previously discussed indicators continue to have the same impact on contributing to agricultural employment.



The level of mobile phone subscribers positively impacts employment in manufacturing

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Map 2.1. Average manufacturing FDI and average employment in the manufacturing sector (2003-2014)

Blue nodes: total inward manufacturing FDI Green nodes: total outward manufacturing FDI Purple areas: average employment
 Source: Wall Mehta and Kaur, 2016, based on fDi Markets and Oxford Economics

Inflation was also added to this model to see if it bears any significance, but this did not prove to be so.

The impact of FDI on employment in manufacturing

The impact of FDI on employment in manufacturing can be seen in Online Appendix Part B, 2.6. It is evident in the three columns (Employment in Manufacturing) that greenfield FDI (column 2) has a significant effect on manufacturing employment although weaker than FDI flows (column 3) and stock (column 4). The first model also shows that the Human Development Index (HDI) has a very significant and positive relation to manufacturing employment particularly in Algeria, Egypt, Morocco and South Africa. As explained earlier, the HDI comprises GDP and education, which are important for job creation in the manufacturing sector. Mahdi et.al. (2008) have shown in their case study on Cairo (Part C of this report) that Egypt is successful because it provides a large cohort of cheap and educated workers, along with superior infrastructure and ease of doing business, making it attractive for FDI.

The volume of manufacturing FDI into Africa is the highest of all investment sectors and the statistical results show that manufacturing FDI has successfully increased employment in African countries.

Map 2.1 shows that countries with higher values of manufacturing FDI are among the top-five recipients of manufacturing FDI and that they also have larger employment in the manufacturing sector (see Online Appendix Part B, 2.12) for hi-tech FDI into Africa which can help the structural transformation in African cities and lead to higher productivity and employment generation in all sectors of the economy. This can also lead to technology diffusion for further growth and spill over into the local manufacturing sector (local producers and suppliers), which in turn can stimulate further downstream productivity of smaller firms within the informal sector, thereby broadening the economic base of African countries.

The results also show that the level of mobile phone subscribers positively impacts employment in manufacturing, for reasons explained previously. Trade openness clearly does not affect jobs in manufacturing, arguably because African-produced

goods are more likely to be locally consumed than traded internationally. Again, the results show that inflation has no direct significant relationship with employment in Africa. Nonetheless, it is clear that it has a negative impact. The *International Country Risk Guide* is also not important in this context.

The impact of FDI on employment in services

Looking at Online Appendix Part B, 2.7, we found that FDI also positively affects the African services employment sector. In model 1 (column 2) we see that greenfield FDI does not affect employment in this sector. However, in the case of FDI flows and FDI stock we see very significant and positive effects on increasing employment in services. Services sector employment in Africa is of increasing importance, not only in terms of growth, but also for employment. Klasa (2015) points out that financial services has been a leading FDI sector from 2006 onwards. Today, foreign investors are keener on the services sector in countries like Ethiopia, Kenya, Nigeria and South Africa. Trade openness positively influences this sector and the more a country trades globally, the more it requires services to facilitate the associated processes.

The same applies to the levels of mobile phone subscriptions, which significantly affect services employment. This is explained by the fact that the more countries are able to communicate through IT, the more they are able to trade with other countries. This is also seen in the mobile phone subscribers and trade openness variable, which is strongly significant. The *International Country Risk Guide* is only significant to greenfield FDI. However, all models show that its sign is negative, meaning that risk is likely to have an unfavourable impact upon employment in services. We see that the working population (age 15 to 65) does have significance, which means that an increase in the working population will lead to an increase in employment in the services sector. Inflation, although a negative influence, does not prove to be significant within this sector.

The impact of sectoral FDI on different employment sectors

The impact on employment in agriculture

This section disentangles total greenfield FDI into four sub-sectors: hi-tech, manufacturing, services and resources. These are tested on the different employment sectors, as in Part A of this report.

Firstly, it is clear that these different forms of FDI have no significant effect upon employment in agriculture (Online Appendix Part B, 2.8). As argued in the Food Security chapter in this part of the report, FDI in the agriculture sector is extractive by nature and focused on exporting raw materials. This confirms that African agricultural production and employment are not really associated with high-tech FDI, services FDI, manufacturing FDI and resources FDI. (The latter is primarily associated with mineral and fuel production.) In addition, a large share of Africa's agricultural FDI goes into agricultural land acquisition, which negatively impacts on local economies, due to the social, economic and political conflicts often associated with such land acquisitions. Agricultural investment in Africa has become a resource-seeking production and export venture, which displaces local farmers and creates unemployment in this sector (Asiedu, 2015).

Agricultural investment in Africa has become a resource-seeking production and export venture, which displaces local farmers and creates unemployment in this sector

The Human Development Index positively matters to employment in agriculture as well. This implies that the more GDP, longevity and education increase, the higher the demand for non-staple food and, therefore, the higher the employment in this sector. Inflation appears to negatively affect this sector because the higher the product prices, the lower the demand and reduced need for employees to produce in this sector. We also see that international country risk negatively impacts employment in this sector. The more risky countries are, the less food production there is, and the less need for employment. Mobile communication has a positive significance in this sector. Population too has a positive effect on employment in agriculture. In other words, the larger a country's population is, the higher the food demand and related employment.

The impact on employment in manufacturing

Where different sectors of greenfield FDI have no relation to agricultural employment, there is



High-tech and manufacturing FDI have created the highest number of jobs in Nigeria

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significance for employment in manufacturing (Online Appendix Part B, 2.9). In the first model (Column 2), we see that hi-tech FDI positively influences employment in manufacturing. It means that there is a likely transfer of multinational technology to local manufacturing processes. Manufacturing is one of the largest sectors in Africa, which gives it great potential for backward and forward linkages with the primary and resource sectors, as well as the tertiary sector, in particular hi-tech manufacturing. Hi-tech is a broad sector, in which manufacturing is the largest subsector and receives large amounts of FDI. Indeed, most of the jobs in the hi-tech sector are created within its manufacturing sub-sectors. The major industries in hi-tech-related manufacturing are chemicals, aerospace and pharmaceuticals. It is particularly the chemical industry which receives large investments and creates large numbers of jobs. Here too, the controls of population and trade openness impact similarly as in previous studies. In the case of manufacturing

FDI, we see an even more significant and positive impact upon the ability to increase local employment. Manufacturing and hi-tech FDI have created the highest number of jobs in Egypt, Nigeria and South Africa, followed by Algeria and Morocco (Online Appendix Part B, 2.12 and Online Appendix Part B, 2.13).

Interestingly, services FDI has no effect on manufacturing FDI. It could mean that, in Africa, services FDI is very particular to itself and not influential to manufacturing. That is verified in the next section (Online Appendix Part B, 2.10) where, indeed, it is shown and indeed, it is clear that services FDI does influence local services employment. This model shows that inflation, population, trade openness and communications all contribute to explaining employment in manufacturing. The last model shows that resource FDI does not contribute to local employment in manufacturing. This reflects the “resource curse”, sometimes called the “paradox of plenty”, and refers to the paradox that countries

with natural resource abundance, particularly non-renewable resources like minerals and fuels, are inclined to have lower economic growth and worse employment outcomes than countries with fewer natural resources (Amusa et al., 2016).

The impact on employment in services

In the analysis of services sector employment (Online Appendix Part B, 2.10), hi-tech FDI has a strong and significant effect upon local employment in services. Besides that, trade openness and IT communications also play an important role in creating employment in this sector. The same pattern is reflected in manufacturing FDI, which also has a positive significant effect. In this model, we again see that trade openness and population size also play an important role. The only FDI sector which does not show a significant relationship with local services employment is the resources FDI sector, which can be explained by the resource curse.

Conclusions and recommendations

Formulate policies to attract the right kind of FDI

During the last 15 years, Africa has shown impressive growth but it has not generated enough jobs, since this growth was predominantly concentrated in the extractive industries. To overcome jobless growth, Africa needs structural transformation which involves a shift of labour to more productive sectors, a more diversified economy and more productive and broad-based growth (African Development Bank Group, 2017).

Since manufacturing is the most important FDI sector for generating employment in African countries, the research findings indicate that African countries should focus on attracting more manufacturing FDI to promote industrial growth and employment. Manufacturing FDI can play an important role in structural transformation and economic diversification, which are both highly desirable since about 90% of the African population is engaged in either agriculture or services (Szirmai et al., 2013).



Agriculture FDI does not create sufficient new jobs in Africa

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The agriculture sector in Africa has high potential for increasing productivity and value-chain addition while playing a crucial role in youth unemployment alleviation. This requires modernization and transformation of the agriculture sector through investment in skills development, access to finance, extension services and assured markets for local products (African Development Bank Group, 2017).

In the light of the above, it is critical for Africa to enact policies that attract manufacturing FDI, with a special focus on labour-intensive light manufacturing. To achieve that, African countries should improve their infrastructure, particularly their communications infrastructure for knowledge sharing. Improving road and rail integration with other countries in the respective African regions is important for the transportation of raw materials and final products and for expanding both the domestic and international markets of products (Wall et al., 2017). Regional integration can also play an important role in attracting manufacturing FDI if similar policies are put in place across countries.

Countries should improve their level of technology and innovation to get better access to foreign technologies. Generating more services FDI will also generate significant numbers of jobs, as shown in Asia. In addition, this sector also benefits from manufacturing FDI and hi-tech FDI. The services sector is considered to be a key growth driver of the future economic environment, either as a “leading complement” or a “lagging complement” or a “substitute” of manufacturing (Leipziger & Yusuf, 2013 pp. 2-3). Governments should emphasize regional policies that foster collaboration and linkages with foreign firms to benefit from foreign investments and knowledge for regional integration.

Strengthening the agriculture sector

Since agricultural FDI does not create sufficient new and additional jobs in African countries, a two-pronged strategy could be adopted to create more employment in this sector. Firstly, the entire sector should modernize, adopting increased commercial but inclusive farming, following sustainable agricultural practices, and making agricultural produce worthy of export. Secondly, local agro-based industries and agri-business, as well as collaboration with MNEs should be strived for. This will create a link between the agriculture and manufacturing sectors and across corporate scales. Besides taking care of food security in their own countries, policies

Countries should improve their level of technology and innovation to get better access to foreign technologies. Generating more services FDI will also generate significant numbers of jobs, as shown in Asia

should promote excess food production for export, following the examples of Malaysia and Thailand that have successfully given an impetus to their industrial sector through agro-based activities (Kjöllerström and Dallto, 2005). African countries could also learn from Vietnam, which implemented agricultural reforms i.e. Doi Moi that triggered the change from a centrally planned to a market-oriented economy. These reforms focused on agricultural extension, land reform and deregulation that resulted in increased agricultural productivity and turned Vietnam into one of the largest exporters of rice, coffee, tea, pepper, cashew nuts, rubber and seafood (The World Development Report, 2013).

Enhancing absorptive capacity

Our study shows that overall greenfield FDI does not have a significant impact on employment in Africa, although different sectors of FDI do. The currently low absorptive capacity of African countries is a likely reason for the weak overall results (Narula, 2003; Szirmai et al., 2013). Unemployed rural youths migrate to towns and cities to seek work and frequently end up in the informal sector working for low wages. This calls for investment not only in human capital but also in physical and technological infrastructure. During the past few years, mobile telephone networks have spread quickly in Africa. This study found that mobile connectivity has a high significance for and positive impact on employment generation because mobile infrastructure provides opportunities for the faster spread of information and innovation. For instance, M-Pesa, a mobile payment service, has played an important role in facilitating banking transactions and trade in Kenya. Therefore, policies and programmes to further stimulate mobile connectivity would be desirable. Additionally, policy initiatives to develop human capital through continuous education and skill development would also be very beneficial.

Part B | Chapter 3

Do Sub-Saharan Cities with Lower Labour Costs Attract Greater FDI Inflows?

By Addisu Lashitew and Ronald Wall







The highest wage rates are in Port Elizabeth, South Africa (above) as well as Johannesburg and Cape Town

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Attracting FDI has become a standard component of the economic policy toolkit, both in developing and advanced economies (Görg and Strobl, 2005; Corzet et al, 2004). In developing economies, FDI is expected to contribute to economic development by filling in the gap between domestic savings and investment requirements (Anyanwu, 2012). This is expected to contribute to economic growth by expanding productive potential, by creating employment opportunities, and through the transfer of technological and managerial know-how from

foreign to domestic firms. Since multinational corporations (MNCs) produce, own, and control most of the world's advanced technology, some of their know-how can spill over to domestic firms through formal means such as technology licensing or informally through employee transfers and other forms of spill over (Görg and Strobl, 2005). Countries in Africa and elsewhere, therefore, pursue diverse policies to attract multinationals to invest in their countries. A wide array of policies including tax incentives and favourable regulatory provisions are

often provided to attract multinationals (Görg and Strobl, 2005). More importantly, developing economies aspire to exploit their locational advantages that make them attractive to efficiency-seeking multinationals (Dunning, 2009). Labour costs in many African countries are relatively low since a large share of the population works in the informal sector and/or is underemployed. Leveraging these low labour costs is an important imperative in FDI policy making in low-wage economies.

However, there is limited actual evidence on the extent to which labour costs drive FDI inflows to African economies. Indeed, few researchers have explored the paradox that African countries receive a low amount of foreign direct investment despite having, for the most part, very low labour costs (Okafor et al, 2015). Moreover, evidence on labour costs and other determinants of FDI inflows that is currently available is to a large extent based on aggregate national data which is likely to compromise the robustness of the conclusions (Herzer et al, 2008; Alfaro et al, 2008; Anyanwu, 2012; Okafor et al, 2015). There is also evidence of scarcity on the relationships between labour costs and FDI inflows into developing economies (Anyanwu, 2012). This study aspires to contribute new insights using a rich dataset of FDI inflows (as used throughout this report) and labour costs measured at the city level.

While the magnitude of the impact of labour costs is relatively small compared to such determinants as host market size and distance, it has nonetheless a statistically significant effect on FDI inflows

Literature

Economic theory states that all other things being constant, higher labour costs discourage investment since these erode the competitiveness of the host country. Although no thorough review of the large volume of literature exists, a study using data from Central and Eastern European Countries has confirmed this negative impact (Bellak et al., 2008). While the magnitude of the impact of labour costs is relatively small compared to such determinants as host market size and

distance, it has nonetheless a statistically significant effect on FDI inflows (Bellak et al, 2008).

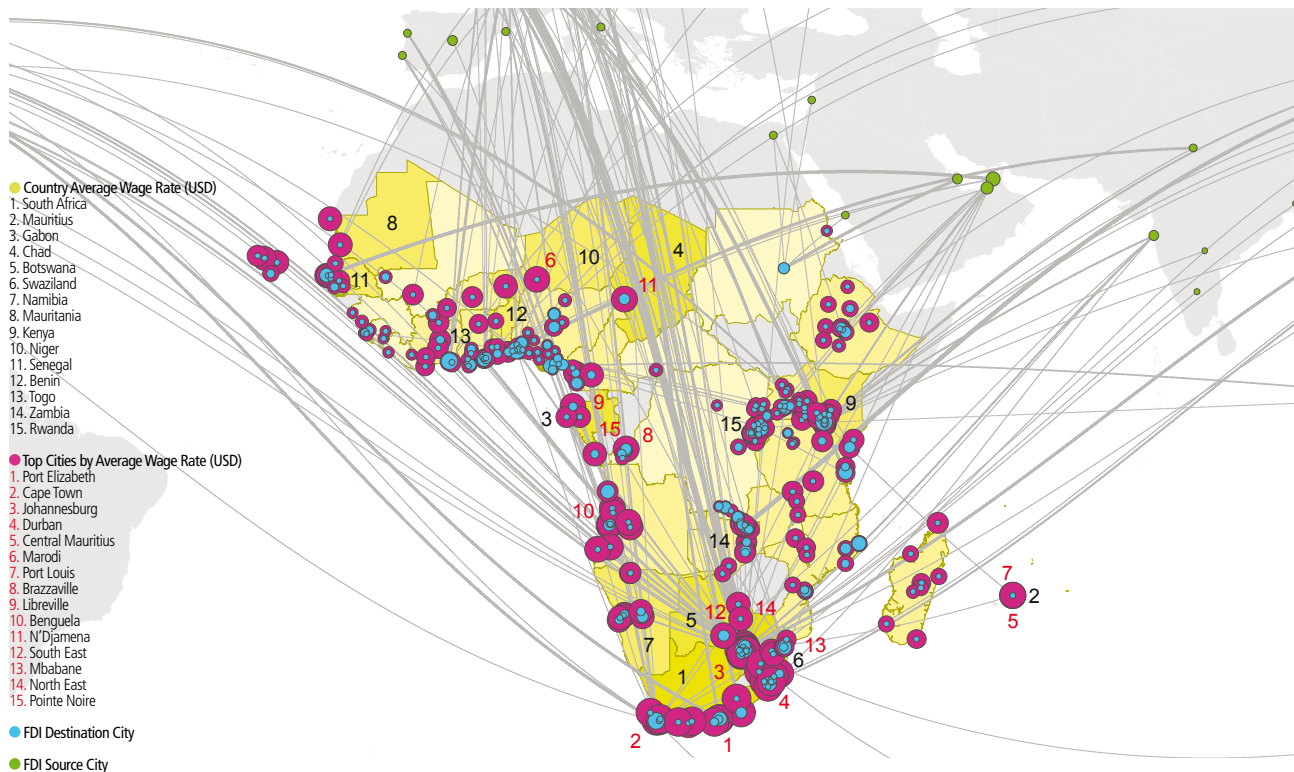
An associated, large body of literature has investigated the effect of FDI inflows on the wage rate of the host country and, if that is the case, whether this spills over to domestic firms (Görg and Strobl, 2005; Hale and Long, 2011; Libsey and Sjöhom, 2004). Indeed, such studies found that multinationals pay higher wages than domestic firms, but the extent of spill-overs is debatable (Görg and Strobl, 2005). However, there exists no evidence of the actual extent to which FDI inflows into African countries and cities is driven by labour cost differences.

Studies in economic geography consider, amongst other things, the spatial dimensions of FDI inflows. For example, Blanc-Brude et al (2014) argue that locational advantages include not only the very attributes of the locality such as agglomeration factors, but also its proximity to other preferred locations. A feature of agglomeration that is less closely studied is the differences that may occur between capital cities and other locations. Although studies from specific countries e.g. Jordaan (2008) for Mexico City, show that capital cities receive the lion's share of national FDI inflows, there is scant evidence on this topic at the international level. Therefore, the research presented in this chapter seeks to investigate the extent to which the FDI inflows into African capital cities remain higher after controlling for other city characteristics, including wage differences.

Data sources and measurement

The data source for city-level FDI is the same *Financial Times* (FT) fDi Markets database used for the other sections of this report. Two alternative measures of FDI were also used: a) the value of FDI inflows at the city level; and b) the city's share of FDI inflows in the national total. For our analysis, we combine the city-level FDI data with a dataset that contained measures of labour costs and productivity for these cities. Stratification ensured representative coverage for the formal private sector across different geographical locations within each country and allowed for the calculation of location-specific representative labour costs on the basis of the amount of annual wages paid by firms. To calculate city-level labour costs, the annual unit labour costs at firm level were calculated by dividing total labour compensation by the number of employees. For the

Figure 3.1. GIS map of inward FDI and average wage rates of cities and countries (2006-2016)



Blue nodes: total inward city FDI Green nodes: total outward city FDI Dark purple city nodes: average wage rates.
Source: Lashitew and Wall, 2017, based on fDi Markets and various sources of data

indicative labour cost of a city, the median wage rate of all the firms located within that city was used. The same procedure was followed to calculate labour productivity, imputed as annual sales per worker. The use of median rather than average values across firms is likely to provide more representative measures of labour costs since median values are not influenced by extremely high and low wage rates, which are likely to be contaminated by measurement errors. Imputing labour costs and productivity from firm-level data has also been used by previous research on FDI inflows (cf. Bevan et al, 2004).

Finally, two types of imputations were conducted to fill in missing data for labour costs and productivity. The wage-rate data from the World Bank’s Enterprises Survey (WBES) did not include certain cities for which the FT database provided FDI data. To get approximate values of labour cost and productivity for these cities, the values of other cities located within the same administrative region (and sometimes within close geographic distance) were taken. The second type of imputation was conducted

to create the panel dataset needed for estimating Model 2 (Online Appendix 3.6). Since the WBES was not conducted on an annual basis, our data for wages and productivity across cities was not balanced, but missed many values. When wage-rate data was available for two non-consecutive years but there was no data in the intervening years, the missing values were interpolated using the observed (linear) growth rate between the two values. In some cases, missing wage and productivity data were extrapolated using annual GDP growth rates, which are a reasonable proxy for the wage growth rate. Since constructing this panel dataset involved more assumptions than the cross-sectional dataset, our baseline analysis is based on the cross-sectional analysis.

Descriptive results

FDI inflows

Table 3.1 provides descriptive statistics of the key variables. The average FDI inflow in the 265 African cities and towns covered is about USD40 million,

whereas the median value is a notably smaller USD8.7 million. The city with the highest amount of FDI inflows is Johannesburg with USD944 million, followed by Lagos, Cape Town and Nairobi, which attracted FDI inflows of USD658 million, USD460 million and USD427 million respectively.

The geographic distribution of FDI into Sub-Saharan cities is shown in Figure 3.1 (blue nodes) and covers the period of 2006-2016 (see also Figures 5, 6 and 7 for FDI distribution at continental, regional and urban scales). Most recipient cities are located on the coast or within a major economic corridor e.g. Gauteng-Maputo, Abidjan-Lagos and Victoria Lake-Mombasa. The grey linkages represent FDI flows from global source cities (green nodes), clearly showing how globally connected or relatively disconnected these cities are. The flow of FDI into capital cities as a share of the total national inflow is typically high to very high, in some cases more than one third of the total. The cities with the greatest proportional share of national FDI inflows are N'Djamena, Abidjan, Dakar, Cotonou and Nairobi.

Statistical results

Table 1 serves as a simplified presentation of the statistical results of Model 1 and are more

scientifically represented in Appendix 3.5. This model uses average values of FDI inflows and labour costs across years, which allows for a larger number of cities (265 cities in 38 countries). The first row of Table 3.1 reveals that labour costs, measured using the log of the indicative wage rate, are not significant in any of the analyses. As shown in the correlation matrix in Online Appendix 3.4, wage rate also does not have a significant relationship with FDI. The data, therefore, provide consistent evidence that differences in wages are not significantly associated with FDI inflow to African cities. When we turn to productivity differences, however, there is a significant negative impact on the level of FDI inflows, although this does not appear if the share of FDI is considered, rather than its actual value.

The negative coefficient of productivity is also difficult to interpret, since we would expect that, given the low labour costs, cities with greater productivity should attract more FDI inflows. Nonetheless, the insignificance of productivity found in the last regressions suggests that there may be other factors influencing the scale of FDI (such as city size) rather than productivity. Interestingly, the capital city variable remains positive and significant in all regressions. Being a capital city appears to have a notable effect on FDI

Table 3.1.
Statistical results for investment in African cities (cross-section)

Variables	Dependent Variable: Log of FDI			Dependent Variable: Cities' Share of FDI		
	0+	0+	0+	0+	0+	0+
Wages (log)	0+	0+	0+	0+	0+	0+
Productivity (log)	--	--	-	0+	0+	0-
Capital city dummy		+++	+++		+++	+++
Doing business rank			0+			0+
GDP growth			+++			0+
GDP per capita (log)			0+			0+
Total GDP (log)			+++			-
Eastern Africa	---	--	--	0-	0-	0-
Northern Africa	0-	0-	0-	0-	0-	0-
Southern Africa	0-	0+	0-	0-	0-	0-
Western Africa	--	-	--	0-	0-	0+

Source: Lashitew and Wall, 2017, based on fDi Markets and various sources of data

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation

inflows over and above labour cost and productivity differences. Being a non-capital city means that there is on average less chance of attracting FDI. Therefore, for these cities other urban factors like technological capacity, efficient ports, infrastructure, or education levels will need to be strongly improved to offset the disadvantage.

Control variables

Turning to the control variables in Table 3.1, the coefficients of the ease-of-doing-business indicator proved not significant in any of the regressions. Nevertheless, in the case study of Kigali in this report, ease of doing business has been posited as one of the important factors for FDI attraction, because administrative and institutional reforms have made the city much safer for foreign investment (Mutebi, 2018). What we learn from this is that in general across many African cities, the ease of doing business is not developed enough to reveal any significant effect on FDI. However, there will always be exceptions, such as the case of Kigali.

GDP growth and (the log of) total GDP have positive and significant effects on the level of FDI inflows. Since both variables are measured at the

GDP growth and total GDP have positive and significant effects on the level of FDI inflows. Since both variables are measured at the national level, this shows that cities in larger and growing economies tend to attract more FDI

national level, this shows that cities in larger and growing economies tend to attract more FDI. The impact of both variables turns insignificant in regression model six, confirming that the effect is associated with the size of FDI inflows and not their distribution across cities. As indicated earlier, a potential limitation of our analysis is that it may fail to account for the influence of wages and productivity on FDI inflows. Since investments take time to materialize, the effects of higher wages or productivity today, may only affect the level of investment after

a year or more. Therefore, this possibility was tested by estimating a longitudinal (multi-year) regression model, in which lags of wage rate and productivity are used to explain current FDI inflows.

The results shown in Table 3.2 are very similar to those in Table 3.1: labour cost measured using indicative wages is not significant whereas the capital cities variable is both positive and significant. This confirms the consistency between our cross-sectional and panel datasets. Again, these results show that wage rate has an insignificant effect on FDI inflows, while the capital city variable remains significant.

Wage rate

The average annual wage rate of the cities in the dataset is USD1,961. This relatively low wage rate is perhaps not surprising given that the average GDP/capita in the sample of Sub-Saharan countries was only USD2,331. As also apparent from Figure 3.1 (dark purple city nodes), annual wage rates vary significantly across the continent, ranging from as low as USD124 to more than USD7,600. The lowest wage rates in our data are for the cities of Zwedru (Liberia), Kolwezi Ado (DR of Congo) and Ekiti (Nigeria) with values of USD124, USD209 and USD280 respectively. The highest wage rates, exceeding USD7,000 are reported for the South African cities Johannesburg, Cape Town and Port Elizabeth. Differences in labour productivity across cities generally go together with those of wage rates. Since wages are highly skewed, they were log-transformed before use in the statistical analysis. Figure 3.1 also shows country aggregations of the average annual city wage rates, with the most prominent in South Africa, followed by Mauritius, Gabon, Chad and Botswana (yellow country areas).

Online Appendix 3.4 provides correlation coefficients between these variables. The log of FDI inflow to cities and the share of FDI inflow to cities are strongly correlated, as expected, with a coefficient of 0.54. Neither wage rate nor productivity appear to have significant correlation with either measure of FDI inflow. The log-transformed values of productivity and wages are strongly and significantly correlated (coefficient = 0.75), indicating the need to control for productivity in our analysis on the relationship between wages and FDI. The correlation matrix also reveals that capital cities have significantly higher FDI inflows. In absolute terms, FDI inflow to capital cities is typically three times higher than other cities in the country



Rapid urbanisation and agglomeration factors have played an important role in attracting FDI to Abuja, Nigeria

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Table 3.2.
Statistical results for investment in African cities (panel model)

Variables	Dependent Variable: Log of FDI			Dependent Variable: Cities' Share of FDI		
	0-	0-	0+	0+	0+	0-
Wages (in log)	0-	0-	0+	0+	0+	0-
Lag wages (in log)			-			0+
Capital city dummy	+++	+++	+++	+++	+++	+++
Productivity (in log)	-	0-	0-	0-	0-	0-
Lag productivity (in log)			0-			0+
Doing business rank	0-	0+	0+	0-	0-	0-
GDP growth	0+	0+	0+	0+	0+	0+
GDP per capita (in log)	++	++	+++	0+	0+	0+
Total GDP (in log)	--	--	---	-	-	-
Eastern Africa	0-	0-	0+	--	---	0-
Southern Africa	0-	0-	0-	-	--	0-
Western Africa	0-	0-	0-	0-	0-	0+

Source: Lashitew and Wall, 2017, based on fDi Markets and various sources of data

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation

(with an average of USD100 million vs. USD30 million), and more than six times higher in terms of the share in national FDI (14.4% vs 2.3%). Since capital cities are likely to have greater productivity than other cities, regression analysis tested if the difference remains significant after accounting for wage and productivity differences.

Conclusions

This section provides new evidence on the relationships between FDI inflows and labour costs using new disaggregated data of FDI inflows into African cities. Applying cross-sectional and longitudinal data analysis techniques to whether African cities with lower labour costs attract greater FDI inflows does not provide any evidence that FDI inflows to African cities are driven by wage differences. It means that this is generally not considered an important operational cost for MNEs operating in Africa.

Differences in productivity also do not appear to have a notable impact. Rather, the analysis showed that capital cities receive significantly higher FDI inflows after controlling for labour cost and productivity differences. These results are strongly significant and remain robust in all specifications. FDI inflow to African cities therefore appears to be driven not so much by costs of labour, as by the forces of urbanization and agglomeration around capital cities. Cairo, Abuja, Nairobi and Johannesburg (Gauteng Province) are examples of such cities where rapid urbanization and urban agglomeration factors play an important role in attracting FDI, as is further explained in the case studies of Part C of this report. There could be multiple reasons for this. Capital cities tend to be larger in size and provide greater market access. They are often better administered and typically home to a relatively better-skilled labour force. Moreover, capital cities could be attractive due to their rich business ecosystems (Corzet et al, 2004) or better access to information that reduces information asymmetries (He, 2002). They are also often the key creative and cultural centres.

Therefore, African policy makers should realize the need to continue investing in their capital cities while, in parallel and over a longer time frame, laying the foundation for the creation of a complementary and both spatially and demographically balanced national urban system, through the facilitation of



Wage costs are not an important operational cost determining whether multinationals will invest in Africa



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integrated and strategic management, finance and governance capacity-building. This does not imply ever-larger and more primate national capitals where negative externalities undermine agglomeration advantages. In a conducive system of cities, the capital and other large cities facilitate urbanization economies; secondary towns serve as complementary industrial nodes and absorbers of new urban populations; and small towns provide rural-urban linkages while facilitating internal scales of economy (The World Bank, 2010; UNECA, 2017b).

The current analysis has certain limitations which need to be addressed by future research, including but not limited to: a) city-specific factors other than labour costs and productivity; b) the effects of city size and governance quality on FDI inflows; c) how the determinants of FDI inflows differ between greenfield investment and mergers and acquisitions; and d) how FDI into primary

African policy makers should realize the need to continue investing in their capital cities while, in parallel and over a longer time frame, laying the foundation for the creation of a complementary and both spatially and demographically balanced national urban system, through the facilitation of integrated and strategic management, finance and governance capacity-building

and extractive industries differs from those in secondary activities. Future research could also use even further disaggregated data to shed light on the impact of labour costs on specific types of FDI inflow. It would also be useful to explore the extent to which agglomeration economies offset labour costs and firm inefficiency disadvantages of Africa. However, none of this can be carried out without the development of high-quality, comparative and standardized data. Therefore, one of the key recommendations for African policy makers is the development of state of the art domestic databases that can facilitate continent-wide databases.

Part B | Chapter 4

Determinants of Foreign Direct Investment into Africa's Knowledge-based Industries

By Ronald Wall, Dorcas Nyamai
and Colin McAweeney

Tungsten mining in Rwanda for the electronics industry. The challenge is to ensure that the exploitation of resources leads to a fair national distribution of wealth
© Harold Bonacquist







Countries like Korea, China and Malaysia have successfully transitioned from agrarian to knowledge-based economies

©Hupeng

Historically, FDI into Africa has neither lifted African populations out of poverty nor has it addressed the growing gap between the more innovative and technologically lagging countries (Liefner, 2009). Economies that rely on a single or a few sectors of economic activity are very vulnerable to price shocks in those sectors. To help address the lack of economic diversification and technological gaps, this study explores the relationship between location factors and the attraction of knowledge-based FDI (KFDI). In turn, it is expected that KFDI in Africa would help to better diversify products and services, generate innovation, and allow for socio-economic inclusion. To these ends, the objective of this research is to identify the locational factors that help attract KFDI to African countries and cities.

It is clear that a digitalized transformation has permeated daily life around the world. This has affected the ways in which people work, consume and spend their leisure time, which are drastically different from how these had evolved up to a century ago. Digitalization has sped up globalization and made the world a much smaller place, where products and ideas are transferred and adopted at a staggering and sometimes even crippling pace (Dickens, 2011).

Historically and geographically, the knowledge economy is mostly located in advanced economies. However, this is no longer an exclusive given, as developing economies increasingly strive to also compete in this arena. In recent decades, Asian countries such as China, Korea, Malaysia and

Singapore, as well as South American countries like Costa Rica, Argentina, Chile and Puerto Rico (OECD 2012), have transitioned from agrarian and primary industries to knowledge-based economies. These economies have leapfrogged previous industrialization trajectories, showing that development and growth are not necessarily linear and path-dependent processes (Redding, 2001). However, the current development structure in many African countries looks very different from these Asian and Latin American countries.

The abundance of cheap labour and natural resources, combined with shortfalls in government funding and regulation, have exposed developing economies to exploitation, especially in the extraction and mining sectors (UNCTAD, 1997). The resultant exploitation of resources without fair national distribution of wealth is, as described in Collier and Goderis (2008), the “Resource Curse” theory. In line with this theory, there is evidence that the extraction economies in Africa, since 2000,

The abundance of cheap labour and natural resources, combined with shortfalls in government funding and regulation, have exposed developing economies to exploitation, especially in the extraction and mining sectors

have neither promoted inclusive wealth distribution nor social equality, even though national GDPs have grown significantly faster than the global average. Against the common notion of natural endowment advantages, the resource-rich countries in Africa have not done any better than the resource-poor economies in lifting their populations out of poverty. Rather, several of these well-endowed countries, like Angola, Gabon or the Republic of Congo are experiencing extreme poverty (Chuhan-Pole et al., 2012). This is also evident in the study on income inequality and FDI, in this part of the report.

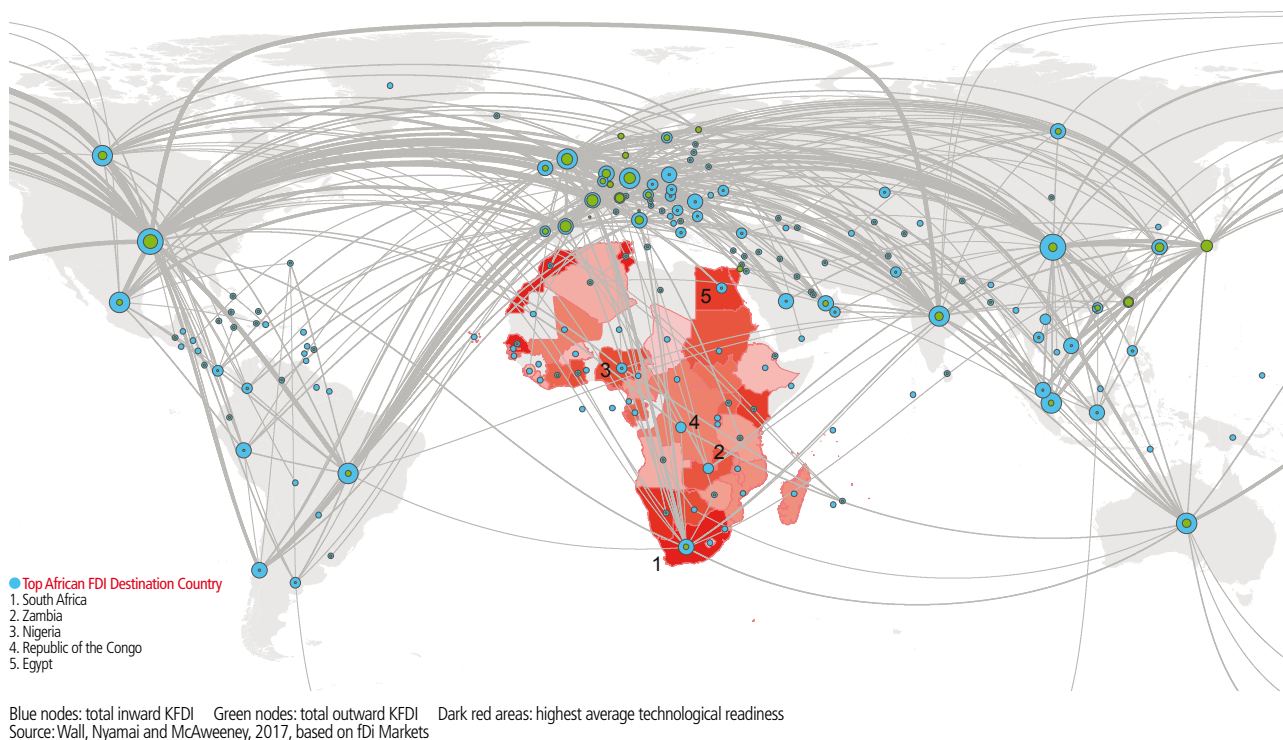
A positive consequence of globalization is the growing market for FDI. Investments from advanced to developing economies can play a very important role when governments do not have the financial

resources for long-term infrastructure projects (Collier, 2014), including the development of knowledge-based economies in Africa. The so-called ‘East Asian Miracle’ of rapid economic growth was largely due to a big increase in FDI flows into these developing economies coupled with a consistent distribution of wealth. Starting in the mid-1980s, the East Asian region’s economy saw an incredible twelve-fold increase in FDI (Urata, 2001). This brought foreign capital, technology and knowledge to these emerging economies and enabled them to compete globally (Hill, 2009; S. Kurtishi-Kastrati, 2013). It was due to these unique FDI benefits and wealth distribution that East Asia was able to catch up with developed economies (Stiglitz, 2001).

Although several developing economies worldwide are becoming increasingly technologically driven, most African countries have not yet caught up, and the relative lack of technological readiness in these countries is said to add to growing income inequality between Africa and the other major regions of the world (Liefner, 2009). Although knowledge-based industries exist in Africa, they are weak and need support from policy makers. This includes policy for promoting and facilitating the necessary pre-conditions to attract FDI in this sector. However, there is a lack of knowledge of what exactly would attract KFDI into Africa. Filling this gap is the key purpose of this study by testing the effect of global competitiveness upon FDI inflows, at three aggregation levels, namely the aggregate Global Competitiveness Index (GCI), the more specific categories of this index (factor-driven inputs, efficiency enhancers and innovation factors), as well as the underlying GCI 12 pillars. Extra (dummy) variables of different African regions have been included in the models to identify possible regional variations, while national population sizes have been included to control for size effects. The model concerns a panel of 36 countries over the period 2006 to 2014 with analyses at two different aggregation scales, i.e. country and city.

Sectoral distribution of KFDI in Africa

Compared to other major global regions, Africa only received a modest amount of KFDI between 2006 and 2014 (see Figure 4.1) with significant variation in its distribution across the continent. The map clearly shows that Southern African countries, particularly South Africa and Zambia, received higher values of

Figure 4.1. Distribution of KFDI and average technological readiness in African countries (2006-2014)

KFDI when compared to other African countries (size of the blue nodes and density of the grey investment linkages). They are followed, in descending order by Nigeria, the Republic of Congo and Egypt. The major investors in KFDI into African countries are the USA, China, India, Brazil and Australia (green nodes), followed by several European countries. The shades of red on the map represent the average level of technological readiness of African countries. Again, a handful of Southern and Northern African countries such as South Africa, Namibia, Morocco, Tunisia, Egypt and Senegal possess the highest level of technological readiness, revealing a correlation between technological readiness and KFDI attraction. In reference to this, *The State of African Cities Report 2008* shows the relationship between road infrastructure development and the emergence of IT Parks. For instance, a hi-tech park called ‘Smart Villages’ has been developed between Cairo and Alexandria to attract FDI and drive the development of Egypt. Similarly, a hi-tech zone at El Ghazala in Greater Tunis is located on the corridor between Tunis and Bizerte and attracted international ICT firms (UN-Habitat, 2008). This supports the arguments in Part C of this report on infrastructure and investment that

The disproportionate distribution of KFDI into the communications sector is likely due to the growing Western and Eastern African middle classes that have disposable income that creates new markets for communication products and services

road network accessibility and regional integration will enable African countries to attract more FDI (Wall, Eles and Alade, 2018).

Distribution of KFDI at the African regional level

In terms of the KFDI trend at the regional level, Online Appendix 4.6 shows that Western, Southern and Eastern Africa experienced significant increases in KFDI between 2006 and 2014. KFDI in Northern Africa grew between 2006 and 2010 but declined thereafter. Central Africa received only a modest amount of KFDI in this period. The sectoral composition of KFDI at the regional scale presents a similar picture to the whole of Africa with little

Table 4.1.
Determinants of KFDI attraction in African countries

Variables	Knowledge Intensive FDI	Knowledge Intensive FDI	Knowledge Intensive FDI	Knowledge Intensive FDI
Global Competitiveness Index	+++			
Innovation and sophistication factors		+++		
Efficiency enhancers		0+		
Basic requirements		0+		
Market size			+++	+++
Technological readiness			+++	++
Financial markets			+++	+++
Population	+++	+++	+++	+++
Northern Africa				0+
Southern Africa				0+
Western Africa				0-
Eastern Africa				0+

Source: Wall Mehta and Kaur, 2016, based on data from FDI Markets and various other sources

+++ Very significant and positive relation
 ++ More significant and positive relation
 + Significant and positive relation
 --- Very significant and negative relation
 -- More significant and negative relation
 - Significant and negative relation
 0+ Not significant but positive relation
 0- Not significant but negative relation

variation. Communications received the largest share of KFDI in Central, Eastern and Western Africa from 2006 to 2014 (Online Appendix 4.7). Most African countries are rapidly catching up on communications infrastructure, such as mobile phone networks and internet connectivity, which not only enables global interaction but also facilitates the dissemination of information and knowledge.

The disproportionate distribution of KFDI into the communications sector is likely due to the growing Western and Eastern African middle classes that have disposable income that creates new markets for communication products and services. Also, there appears to be a market for private projects in lieu of some governments' inability to supply public communication infrastructure in the desired quantities. Southern and Northern Africa received the largest shares of KFDI in the renewable energy sector, possibly because countries in these regions are relatively more developed, which could imply a degree of market saturation and hence limited potential

for communication projects. In turn, this is likely to have increased their potential to shift towards more sophisticated types of KFDI e.g. renewable energy.

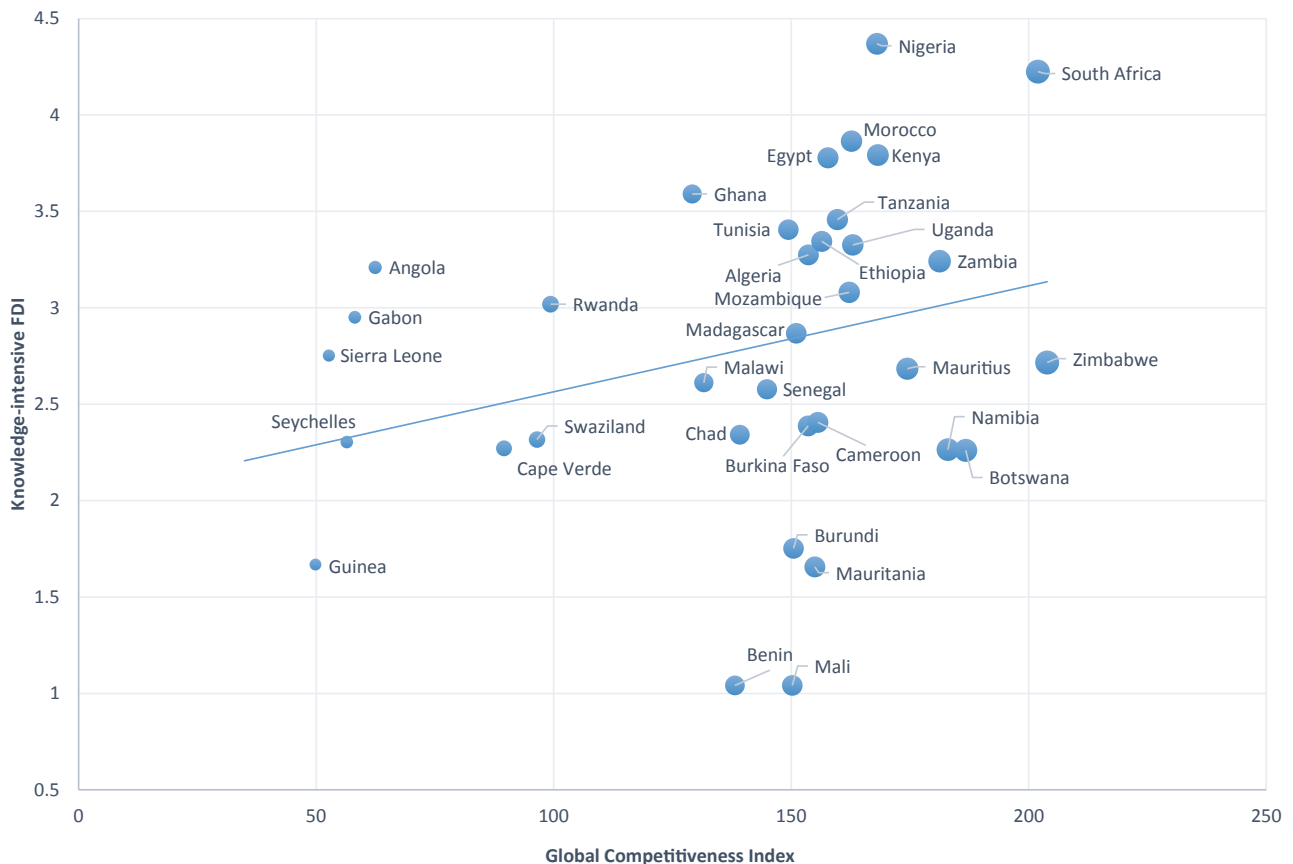
Findings

Firstly, the determinants of KFDI into African countries were explored (see Table 4.1). Model 1 (column 2) shows that the Global Competitiveness Index (GCI), when controlled for population size, is highly significant for KFDI attraction. This implies that the more a country improves its overall competitiveness, the more knowledge investment it will be able to attract, regardless of the size of the population. It is clear from Figure 4.2 that countries leading in GCI, such as Egypt, Kenya, Morocco, Nigeria and South Africa also receive higher amounts of KFDI in comparison to other African countries. Population size itself also proves to be highly significant for KFDI. Together, these two variables explain 40% of the attraction of KFDI into Africa.

In column three of Table 4.1, the three major components of GCI are unfolded and tested on KFDI, while again controlling for population. From this, we see that basic requirements which is comprised of unskilled labour, natural resources, appropriate infrastructure, good health and primary education, do not serve as significant determinants for attracting KFDI. This suggests that countries that are at the basic requirements stage of development, are not likely to attract KFDI. Similarly, countries strong in the efficiency enhancers stage of development are also less likely to attract KFDI. This comprises factors such as basic education, efficient labour markets, and market size. However, what does attract KFDI are innovation and sophistication factors i.e. business sophistication and technological innovation, with countries that have achieved this stage of development able to attract KFDI.

Johannesburg and Cairo are the leading African cities for KFDI due to their strength in innovation and sophistication factors. (See also Part C of this report). A number of studies have similarly shown the importance of ICT innovation for FDI attraction, explaining that it reduces search time and associated costs, thus increasing productivity and efficiency (Pacific and Joshua, 2015). Since development of ICT is closely associated with innovation, this result is aligned with the arguments of Economou (2008) or Azmat and Basu (2003) that a strong ICT infrastructure system creates a conducive environment for innovation and

Figure 4.2. KFDI and Global Competitiveness Index in Africa (2006-2014)



Source: Wall, Nyamai and McAweeney, 2017, based on fDi Markets and GCI

entrepreneurship and this is particularly important for knowledge-based economies to further attract KFDI. Simultaneously, it would lead to the diversification of the economy by generating new economic activities and business activities.

The scatterplot of Figure 4.2 reveals that more developed African economies, such as Egypt, Kenya, Morocco, Nigeria, South Africa and Tunisia, have all attracted higher amounts of KFDI, because they are globally competitive and characterized by a conducive environment for innovative and sophisticated knowledge-based industries.

At an even deeper level, the 12 pillars that make up the three previously discussed GCI categories are explored. These pillars are quality of institutions, appropriate infrastructure, macroeconomic framework, good health and primary education, higher education and training, efficient goods markets, efficient labour markets, developed financial markets, technological readiness, market size,

sophisticated production processes and innovation. The results of model 3 (column 4 of Table 4.1), show that, at this level of detail, only market size (efficiency enhancer), technological readiness (innovation factor) and financial markets (efficiency enhancer) matter to KFDI investors, when controlled for country size.

The market size indicator concerns the combined size of a country's domestic and foreign markets. This measure reflects a country's efficiency gains through specialization and its ability to take advantage of economies of scale in the production of services and goods. Firms in large markets can realize increasing returns to scale through producing higher output with less input (Yu and Walsh, 2010; Gabriel et al., 2016; Nasir, 2016). Big markets also enable larger incentives for the generation of new ideas, increased human capital and the diffusion of knowledge. This is credible because Algeria, Egypt, Kenya, Morocco, Nigeria and South Africa have large market sizes and attract higher KFDI, when compared to other countries.

The significance of technological readiness reflects the importance of technology for KFDI attraction and how agile a country is in adopting new machinery, material, equipment, processes and organizational methods, and where domestic enterprises can either invest in importing technology from overseas, or benefit from the spill-overs of international companies who have invested in their country. Communication technology (ICT) is a major component of technological readiness (WEF, 2016), and as stated earlier, a growing volume of literature has emphasized the importance of ICT in attracting FDI. Arguably the transfer of technological knowledge is proportionate to the foreign investment, the transfer of know-how to local workers, and the relative development level of the country.

Furthermore, although FDI generally nurtures growth, the overall impact possibly also depends on the quantity and quality of local suppliers, human capital, finance, available sectors, and the ability of international firms to cooperate with local contacts.

Although FDI generally nurtures growth, the overall impact possibly also depends on the quantity and quality of local suppliers, human capital, finance, available sectors, and the ability of international firms to cooperate with local contacts

It is evident from Figure 4.1 and the scatterplot (Online Appendix 4.8) that Egypt, Kenya, Morocco, Nigeria and South Africa are all also ahead of other countries in terms of technological readiness. They are therefore able to attract higher FDI in knowledge-intensive industries and move upwards to advanced levels of technology and development. Moreover, the fact that these countries also have more developed financial markets, further attracts KFDI. The significance of the financial market indicator, reveals



Resource-rich countries in Africa have not done any better in terms of lifting their populations out of poverty

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how a country's prices reflect public information, risk-management (e.g. through hedging) and the allocation of savings to the most productive investments. This can only be achieved if financial markets are stable.

More developed financial markets also advance the provision of capital to entrepreneurs by facilitating access by investors to information about opportunities that best enable productivity. Added to this, well-developed financial markets help local firms to take advantage of knowledge spill-overs and to create conducive environments for FDI (Alfaro et al., 2000; Costigan et al., 2016; Alfaro et al., 2009). Cairo and Johannesburg present good examples of such well-developed financial markets in Africa and, not surprisingly, it helps them attract higher FDI (see also Part C of this report). Lastly, by allowing for an efficient system of payments, the financial sector

decreases transaction costs in the exchange of goods and services, which generates productivity gains. Again, Kenya, Nigeria and South Africa have stable financial markets that facilitate KFDI attraction (Online Appendix 4.9).

The fourth model (fourth column of Table 4.1) reveals that African regions do not show significant differences across the continent. This suggests that KFDI is unaffected by geography and that the determinants of technological readiness, financial markets and market size serve as generic factors in attracting KFDI. Lastly, the final model strongly explains KFDI attraction in Africa (56%). However, this also means that around 40% of the model still needs to be explained by variables not included in this study. This is an area for future research.

A similar analysis was carried out at the level of African cities (Online Appendix 4.5) and



Kenya's capital Nairobi is an emerging hub for start-ups

© Jacek Sopotnicki

revealed that the levels of broadband access and mobile phone subscriptions have a significant and positive influence on KFDI into African cities. This finding aligns with several studies that emphasize the importance of the internet for attracting FDI (e.g. Choi, 2003 and Economoe, 2008). Among the cities analysed, Lagos has the highest number of broadband connections, while Johannesburg leads in mobile subscriptions. Both cities attract higher KFDI than other African cities. Similarly, Appendix 4.5 further suggests that the presence of “technology incubators” also plays an important role in attracting KFDI. An example of this is the newly established Tshimologong IT precinct in Johannesburg.

As seen in the Appendix, higher employment rates also attract higher KFDI inflows. It is also evident that African cities that best attract KFDI are located in relatively developed countries with well-developed sectors that generate better employment opportunities and higher employment rates, e.g. Casablanca, Cairo, Johannesburg and Cape Town.

Conclusions

This study concludes that global competitiveness is a major determinant of KFDI in African countries. Among the three components of the GCI Index, innovation and sophistication factors are the most important for attracting KFDI, whereas efficiency enhancers and basic requirements are insignificant for KFDI as these are associated with relatively lower levels of development. This finding supports the argument that knowledge-intensive industries locate in countries with advanced stages of development and specifically in large cities that provide conducive environments for these activities. New technology provides the opportunities for the emergence of new sectors. For example, Cape Town, Lagos and Nairobi are emerging hubs for knowledge-based start-ups in Africa. Such technologies, combined with efficient policies can lead to sustainable growth in Africa. New technology can promote small-scale manufacturing and enable more competitive and efficient growth. New technology and enhanced infrastructure in the communication sector enable domestic firms to reach and better participate in global markets (African Development Bank Group, 2017).

Egypt, Kenya, Morocco, Mozambique, Nigeria, Tanzania and South Africa attract greater amounts of KFDI, due to their higher levels of development

and global competitiveness. At a deeper level, it was found that market size (efficiency enhancer), technological readiness (innovation factor) and financial markets (efficiency enhancer) are the most important factors in attracting KFDI. These factors are strongly associated with cities, explaining why major urban areas are better at attracting knowledge-based FDI. Technology diffusion accelerates overall growth and the productivity of other sectors by generating new economic activities through inter-sectoral linkages.

At the city level, the extent of broadband access and mobile phone subscriptions proved to be the most important factors for attracting KFDI. Broadband access is a significant determinant for the financial and business services subsectors

Domestic market size is associated with efficiency gains through specialization and the ability to take advantage of economies of scale in the production of services and goods. This further explains the success of Algeria, Egypt, Kenya, Nigeria, Morocco and South Africa in attracting KFDI. The findings also show that well-developed and stable financial markets facilitate KFDI.

At the city level, the extent of broadband access and mobile phone subscriptions proved to be the most important factors for attracting KFDI. Broadband access is a significant determinant for the financial and business services subsectors. Since internet access is closely related to broadband access, it is significantly related to KFDI in the software & IT services subsector. Similarly, mobile phone subscription levels are closely associated with the communications sector, which comprises the largest share of KFDI in African countries. In addition, technology incubators also play a significant role in attracting KFDI by facilitating innovation and technology-related activities. Lastly, higher employment rates also have a positive and significant impact on KFDI in large, developed cities with strong concentrations of economic activities and employment (agglomeration).

Part B | Chapter 5

Infrastructure Networks and Foreign Direct Investment

By Ronald Wall, Lynda Bitrus Elesu
and Taslim Alade

Liberia. Road transport in western Africa is slower and more expensive compared to other regions because of insufficient infrastructure
© Nimely







Cairo has a network of roads connecting it to other cities and attracts large volumes of FDI

©Hecke01

Access to good infrastructure is considered to be one of the major factors guiding the investment decisions of multinational enterprises (MNEs). Therefore, this study explores to what extent Africa's road infrastructure networks determine FDI attraction, with an emphasis on the Lagos-Abidjan (L-A) Corridor in Western Africa. This is done by means of a space syntax methodology, which measures a city's road connectivity and regional integration.

According to the World Economic Forum (2015), strong and well-developed physical and virtual infrastructure networks enhance economic competitiveness and productivity. Such networks serve as a pull factor for FDI and foster global economic integration. Africa is the least integrated continent in the world, with comparatively low levels of inter- and intra-regional economic exchange, and has the least share of global trade of all major

regions in the world. Integration can be facilitated by investments in infrastructure that, together with a stable economic outlook and good domestic institutions, will attract FDI. Conversely, insufficient and low-quality infrastructure impedes investment and economic integration both by raising transaction costs and by limiting access to local and international markets (Rehman et al., 2011).

Land transport is expensive and slow in Western Africa compared to other African regions, which can be attributed to insufficient infrastructure and administrative bottlenecks, such as border control and customs clearance (Kuhlmann, 2011). Investment in physical infrastructure e.g. rail, roads and ports, will improve productivity in the long run, and strengthen firms through facilitating market transactions and positive externalities such as increased connectivity and regional integration

(Jimenez, 1994). A 10% improvement in infrastructure is said to lead to an 8% improvement in export performance and increases FDI by 10.3% (Asiedu, 2006). However, infrastructure in the Lagos-Abidjan Corridor is in a state that impedes its productivity and, therefore, the inflow of FDI. This is evident by the obvious lack of an efficient regional rail network; absence of strong regional marine and airport hubs; dilapidated roads; and a generally erratic power supply that all raise the price of goods made there by 75% (Trebilcock, 2015). Bridging these infrastructural gaps and creating a more competitive region could increase Africa's annual GDP growth by 2% which will enable Africa to achieve sustainable growth in the long run (Trebilcock, 2015).

The objective of this study is to investigate the relationships between FDI and road infrastructure in Africa. Where previous studies used data concerning the quantity or quality of roads in countries, this study goes a step further by also exploring the road network connectivity between West African countries and all other countries in Africa, or what is called the continental "reach" of a country. It is based on a mathematical measure of the connectedness of a country to every other country in a continent. The network analysis technique uses "closeness" - a statistical measure of how integrated a country is within the continental road system. In the tables provided in this section this measure is labelled "integration".

There is a significant difference in the road network density and connectivity in Western Europe and that of West Africa, as shown in Online

Appendices 5.7 and 5.8. Despite the significantly larger population, the connectivity in Western Africa is sparse, apart from several pan-African highways linking the region to Northern Africa and the remainder of Sub-Saharan Africa. It is argued in this study that these weak connections affect a country's ability to attract FDI.

Globally, FDI has continued its gradual recovery after the financial crisis and subsequent recession, despite continued economic uncertainties and political risk, and grew by 10.9% between 2012 and 2013 (fDi Intelligence, 2014). However, this growth was not uniformly distributed. For instance, in 2013, Africa recorded a 10.8% growth in FDI, while Europe witnessed a 12.1% decline (fDi Intelligence, 2014). According to UNCTAD (2015), although the global inflow of FDI declined by 16% in 2014, there was an increase in FDI to developing countries. Africa accounted for 4.4% of this increase.

Findings

Table 5.1 shows three degrees of road integration to establish whether different limits of regional integration matter to the attraction of FDI. The smallest limit concerns a radius of 3 kilometres around major Western African cities (local). The next radius expands to 30 kilometres for each city (regional), while the final limit (N-km) concerns their reach to all corners of Africa (continental). The statistical models are tested on three types of FDI (from independent sources to check for consistency of results i.e. greenfield FDI, FDI flows and FDI stocks). Greenfield FDI concerns investments

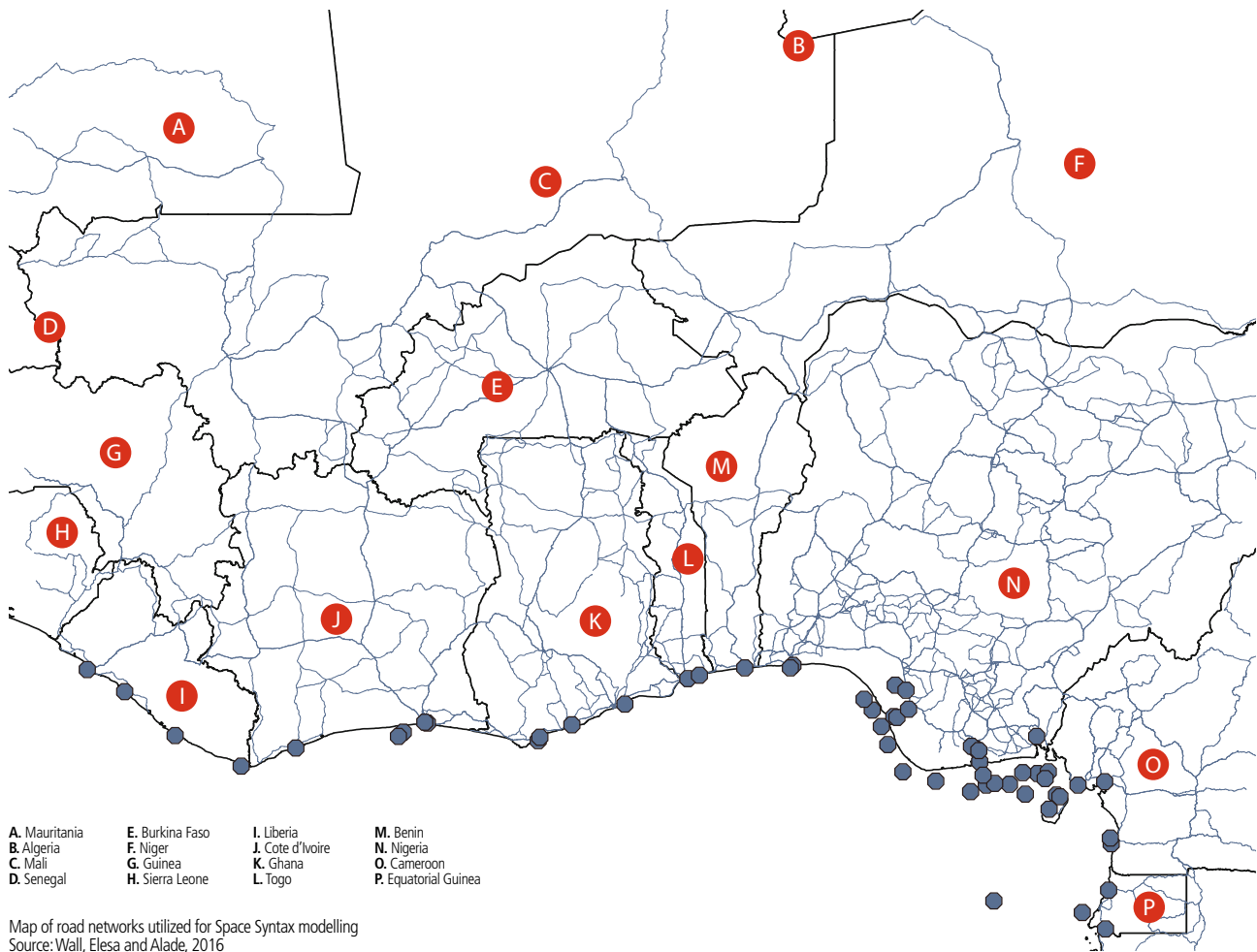
Table 5.1.
Statistical results FDI, integration and Global Competitiveness Index

Variables	Greenfield FDI	FDI Stock	FDI Flows	Greenfield FDI	FDI Stock	FDI Flows	Greenfield FDI	FDI Stock	FDI Flows
Integration (closeness-N-km radius)	---	---	---						
Integration (closeness-30km radius)				---	---	---			
Integration (closeness-3km radius)							+++	+++	+++
Global Competitiveness Index	++	+++	+++	++	+++	+++	++	+++	+++
Total country population	+++	+++	+++	+++	+++	+++	+++	+++	+++

Source: Wall, Eles and Alade, 2016. Data from fDi Markets, WEF, UNCTAD, World Bank and various other sources.

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation

Map 5.1. Road integration measure of the Lagos-Abidjan Corridor in Western Africa (2016)



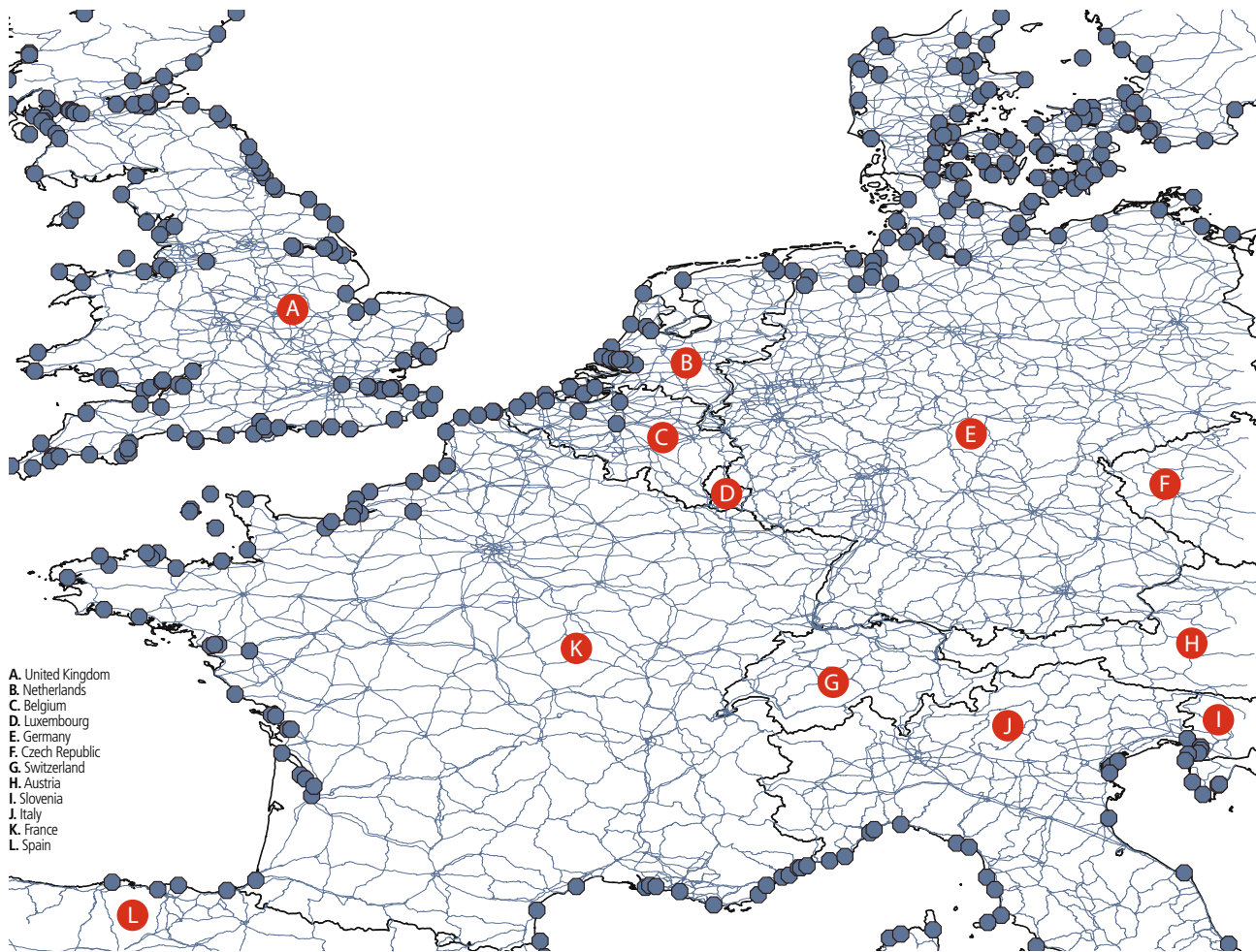
into new projects and therefore excludes mergers & acquisitions (M&A), whereas FDI flows concerns the net inflow of all types of FDI (greenfield, M&A and brownfield). FDI stock concerns the cumulative historic FDI into a country. These different FDIs were used to test the robustness of the results.

The results show that the smallest road integration measure, the 3km radius (see Table 5.1, column 3), has a very significant positive impact on FDI. It implies that strong local road connectivity within Western African cities is an important attribute for foreign firms to locate there. It also suggests that if a particular city improves its local road integration within the urban region, an increase in FDI can be expected. As Table 5.1 indicates, this is valid for all three types of FDI. The most important finding, however, is that the more integrated a road system is (regardless of geographic radius), the more it will attract

We can conclude that when a city enhances its road connectivity within the immediate urban region and consequently provides firms with reach to more distant markets, more MNEs and investment can be attracted

investment. This becomes even more evident in rows 1 and 2. Row 2, the 30km radius around the city, reveals a very significant but negative effect of road integration upon FDI attraction. It is clear from Online Appendix 5.8, that as we move away from a city of origin, the road linkages become sparse. As the scope of a city's road network extends from the urban core to the greater

Map 5.2. Road integration measure of the North Sea-Mediterranean Corridor in Europe (2016)



Map of road networks utilized for Space Syntax modelling.
Source: Wall, Eles and Alade, 2016

region and beyond, the level of integration reverses and starts to negatively affect the city's ability to attract FDI. In other words, in the case of West African cities, FDI is geared to the immediate urban conurbation, and neither to the greater region nor continent.

In the case of Europe, FDI would be significantly attracted to the local, regional and continental scale, as firms seek greater market penetration. The important finding is that the less cities are integrated with other cities through their road networks, the more this impedes the attraction of FDI. We can conclude that when a city enhances its road connectivity within the immediate urban region and consequently provides firms with reach to more distant markets, more MNEs and investment can be attracted. This is supported by the motives of MNEs

to invest in Africa, Europe and globally (Table 6.3 in Part A), where proximity to markets serves as a key factor for firms to invest in cities. Furthermore, it was found in the resulting data that Nigerian and Ghanaian cities are the most integrated with other cities in terms of local connectivity (3km radius) and also receive the highest FDI volume within the region, whereas Gambian cities proved to be the least locally connected, and also held the lowest FDI flows. This can be inferred from Map 5.1 as well. African cities are experiencing high infrastructure deficits, where poor transport infrastructure is responsible for 40 per cent of logistics costs in coastal areas and 60 percent in landlocked countries. Road networks are clearly not efficient, while rail networks are also sparse and poorly maintained (UN-Habitat, 2014).

Row 1 of Table 5.1 shows the same outcome. This model uses the most extreme radius (the full extent of the Western African countries to the entire African continent (N-km radius)). In this case, there is also a very significant but negative effect of continental integration upon the attraction of FDI. It infers that Western African countries are not strongly connected to the remainder of the continent. It further suggests that if continental road connectivity improves, increased FDI can be expected.

For instance, Cairo is well connected to the other Egyptian cities through a network of roads and attracts large values of FDI, whereas Kigali lacks regional connectivity, particularly the distance to seaports hinders FDI attraction in the city (see also Part C of this report). The Gauteng Urban Region in

GCI reveals a very significant and positive effect on attracting FDI. Since competitiveness is a country's capacity to compete in the global economy, it plays an important role in attracting FDI

South Africa - a system of clustered core cities with an approximate radius of 100 kilometres from the Johannesburg CBD - is densely linked through roads and other physical infrastructure and shared services, but also connects strongly to Durban, Maputo, Richards Bay and Harare (UN-Habitat, 2008; Anon,



Railways have high front-end costs but are often the best option in the long run

2015). This provides foreign and domestic firms with a much better reach to more distant markets. In turn, this amplifies both intra- and inter-country trade and contributes to economic growth. Nonetheless, even though integration has a strong bearing on FDI, it explains only to a limited extent the region's (L-A Corridor) ability to attract investment (Online Appendix 5.5). Therefore, Table 5.1 also shows the findings after testing whether integration still has significance when the Global Competitiveness Index (GCI) is included in the model, as well as population to control for country-size effect.

GCI has a very significant and positive effect on attracting FDI. Since competitiveness is a country's capacity to compete in the global economy, it plays an important role in attracting FDI. It is a measure which

includes governance and economic variables such as economic growth, education, innovation and ICT. In the section on knowledge FDI in Part B, it was found that GCI is also a significant factor for attracting KFDI into African countries

The results also show that the size of a country's population matters to FDI attraction, and particularly at the smaller scales of 3km and 30km radius. This aligns with previous studies, which claim that countries with a larger population attract more FDI (Checchi and Faini, 2007; Yu and Walsh, 2010) because larger populations provide the bigger markets that investors seek. *The African Economic Outlook* (OECD, 2017) also states that increasing consumption demand due to a growing population and expanding middle classes is an important source of economic growth in Africa.

In a follow up to Table 5.1, the GCI was unfolded to reveal which sub-indicators are essential to FDI attraction while maintaining the road integration and population variables (Online Appendix 5.6). The significant GCI sub-indicators proved to be market size and higher education. In these more detailed results, all three scales of road integration remain highly significant and their signs remain the same (Online Appendix 5.6). In West Africa, Ghana and Nigeria have the highest association between FDI and market size, whereas Guinea and Sierra Leone have smaller market sizes and attract lower values of FDI.

The case study of Cairo shows that the availability of cheap and educated workers makes this city attractive for FDI

As seen in Table 5.1, higher education also proves to be an essential positive attractor of investment, suggesting that the higher the education levels in countries (i.e. well-educated workforces), the more interesting these countries are to foreign firms. This indicator shows that foreign firms seek out countries with educated and cheap labour, where manufacturing and service production can be developed. The case study of Cairo shows that the availability of cheap and educated workers makes this city attractive for FDI (Mahdi et.al, 2018). Borensztein et.al (2008) also found a strong relationship between human capital (particularly higher education) and



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Countries need to overcome administrative bottlenecks such as border controls through unified economic and trade policies

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FDI, and showed that the interaction between FDI and higher education leads to higher economic growth in host countries. In the Western African corridor, FDI is, indeed, associated with higher education levels in countries e.g. Benin, Burkina Faso, Ghana, Mali, Nigeria and Senegal. Furthermore, in these detailed results, population size continues to explain the attraction of FDI, highlighting the relevance of economies of scale. So the more a country's population, market size, higher education and road integration at local, regional and continental scales increase, the more FDI will be attracted.

Conclusion and recommendations

For the Western Africa corridor, extending the integration of its road network to the immediate region and Africa as a whole is likely to significantly improve its ability to attract FDI. This will require

overcoming various bottlenecks e.g. linguistic differences, cultural and ethnolinguistic diversity, multiple economic communities (CEN-SAD, COMESA, EAC, ECCAS, ECOWAS, IGAD, SADC and UMA), border and customs issues, lack of integrated holistic regional vision and policy, and market heterogeneity along the corridor. These factors impede development and FDI attraction. Therefore, unified trade and economic policies are needed, perhaps collapsing multiple economic communities into a broader one, and harnessing the market size potential of the entire West African corridor.

In this context, the key message of this study, unlike previous studies, is that a country should not only focus on improving its own national road connectivity, but also its connectivity with the countries in its immediate region, and ultimately the entire continent.

The more the continent's road infrastructure integrates nations, the more this will spur African

economic development. Although this study only looked at road connections, it is expected that by also improving rail, air, port and utility infrastructures a highly accessible environment can be created for domestic firms to compete favourably in international markets. Investment in road, railway and energy networks is crucial to urban economies, as it will connect remoter areas with cities and unlock their agro-industrial and manufacturing potential. It will facilitate the flow of people, goods and services and connect the landlocked countries of the region to the world, while ensuring the security of water, food and energy supplies (UN-Habitat, 2014).

A diverse and connected system of African cities can accelerate the process of industrialisation, both by opening up new locations for industry and creating access to larger markets (African Development Bank, 2016; UNECA, 2017b). A successful example of this is Cairo's connection to all Egyptian cities through a network of roads, including the Red Sea Highway that connects Cairo with Egypt's eastern coastline and the Sinai Peninsula. Several African countries have realized the potential of urban development corridors and transnational corridors. Examples include the Maputo Development Corridor, linking the South African industrial heartland of Gauteng with the seaport of Maputo, Mozambique; the Kenitra-Casablanca Corridor; and the Thika-Nairobi-Machakos Corridor, amongst others (UN-Habitat, 2008)

Due to data limitations, this study focused somewhat narrowly on road integration but other modes of transport such as railway, air and water transport also play important roles in connectivity amongst cities. Therefore, African governments should focus on improving all modes of transport for increasing integration within the continent. Most African countries have an inefficient and weak railway system. Railways are particularly efficient in the transportation of bulk, whether raw materials, half or end products or large volumes of people across cities, countries and internationally. It is therefore strongly recommended that Africa develops efficient light and heavy railway systems to connect, in particular, port cities with their hinterlands and landlocked countries. Railways typically have high front-end investments but are very often the better option in the long run. As highlighted in the New Urban Agenda of UN-Habitat, cities should be connected through economic, social and transportation links to form

a system of cities, domestically and internationally. This will not only strengthen local, national and regional economies, but also attract more foreign investment. Technology-based, environmentally friendly new modes of public transport such as transit systems should be promoted to reduce pollution and congestion in cities (United Nations, 2017) and more effectively integrate urban mobility with enhanced transportation of goods and services (UN-Habitat, 2014; Lall et al., 2017; UNECA, 2017b).

Further research on infrastructural integration should be carried out. Scenarios of the optimal market reach of cities to the rest of the continent should be simulated for better insight. This can inform regions where to invest to improve connectivity and optimize economic development. The emphasis should be

Technology-based, environmentally friendly new modes of public transport such as transit systems should be promoted to reduce pollution and congestion in cities and more effectively integrate urban mobility with enhanced transportation of goods and services

on the quality and efficiency of infrastructural networks, such as road, rail, ICT and electricity, for stronger regional and continental integration. This requires economic and trade policies like, for instance, the European Union's Trans-European Transport Networks (TEN-T). Similarly, the Western African region is characterised both by ethno-linguistic duality and a multitude of institutions that focus on promoting regional integration and cooperation. These are the very institutions to guide the processes of policy and strategy development towards closer integration and effective coordination. Member countries of ECOWAS or WAEMU should strengthen these institutions and frameworks that foster public infrastructure financing through integrated corridor approaches. This can be achieved by partnering with development and financial institutions such as the African Development Bank (AfDB) and European Investment Bank (EIB), amongst others.

Part B | Chapter 6

The Attraction of Direct Greenfield Foreign Real Estate Investments into Sub-Saharan Africa

By Max van Gils, Jeroen van Haaren and Ronald Wall

Investment in the construction sector can provide a relatively large amount of jobs in Africa because of its high multiplier factor
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Only when the majority of urban populations have access to water, electricity and sanitation can the benefits of agglomeration outweigh the costs

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Many urban centres in Sub-Saharan Africa (SSA) currently do not function as the envisioned engines of growth (World Bank, 2008; UN-Habitat, 2012; Castells-Quintana, 2015). This is, at least partially, caused by “urbanization without growth” (Fay and Opal, 1999) and institutional failures that are associated with “poor country urbanization” (Glaeser, 2014). In these urban areas, the negative agglomeration externalities outweigh the positive (Castells-Quintana, 2015; Glaeser, 2014) and diminish the economic growth potential normally accompanying urban agglomeration. Because real estate plays a particularly crucial role in modern economies, this study argues

that foreign real estate investment (FREI) may help to break through the negative urban dynamics. In many countries housing constitutes the largest share of national wealth, and real estate functions are an important countercyclical asset for the financial sector (Lowe, 2015; Harvey, 2014; World Bank, 2008).

The construction sector often also represents a significant part of GDP and due to its high multiplier factor, provides a relatively large amount of jobs, directly and indirectly (Tibajjuka, 2009). Therefore, although SSA currently suffers from severe deficits in urban housing and services provision while urbanizing at break neck speeds, urban development

FREI has the potential to fulfil a conducive role in African urban development by enhancing economic growth, improving the built environment and by creating large numbers of jobs

could offer great economic growth-enhancing benefits, besides providing extensive employment opportunities for many.

FREI has the potential to fulfil a conducive role in African urban development by enhancing economic growth, improving the built environment and by creating large numbers of jobs (Dasgupta et al., 2014; Harvey, 2014; EY, 2015). Inappropriate urban planning and building regulations and inadequate urban service provision can, however, deter the economic growth normally associated with real estate development (Collier and Venables, 2013; Brueckner and Lall, 2015; Castells-Quintana, 2015). Although the interest in FREI into Africa is increasing (Watson, 2013; KnightFrank, 2015; JLL, 2015; PWC, 2015), we have to keep in mind that the amount of FREI attracted by Sub-Saharan Africa is still very small.

The determinants of total FDI have been extensively researched, but FREI has received far less attention (Rotherberger, 2010). Expectedly, the location factors that attract FREI are different from those that determine general FDI attraction (Laposa and Lizieri, 2005; Holsapple et al., 2006; Rodríguez and Bustillo, 2010; Fereidouni and Masron, 2013; Salem and Baum, 2016; Rotherberger, 2010). One such overlooked factor is the impact of legislative, regulatory and procedural aspects therefore this study seeks to explore this in general and in the context of SSA in particular.

General determinants of FREI

Since the 1990s, international capital flows into real estate have experienced rapid growth (Moshirian and Pham, 2000; Sassen, 2014; Rotherberger, 2010). Increased global connectivity and its financial impact on real estate have made this formerly non-tradable good now tradable (Bardhan et al., 2004; Bardhan and Kroll, 2007; Harvey, 2014; Sassen, 2014) and FREI now functions as a countercyclical storage of surplus capital (Harvey, 2014). For example, a strong correlation exists between the US stock market decline and the increase

in FREI outflows (Moshirian and Pham, 2000). As is the case with general FDI flows, FREI is determined by macroeconomic and institutional factors such as GDP per capita, inflation, population size, political stability and interest rates (Selma Kurtishi-Kastrati, 2013, Lieser and Groh, 2013; Fuerst et al., 2015; Moshirian and Pham, 2000; Rodríguez and Bustillo, 2010; Fereidouni and Masron, 2013; Salem and Baum, 2016). Total FDI inflows are also a determinant for FREI (Masron and Fereidouni, 2012), emphasizing the interdependence of real estate and international economic activity. Furthermore, FREI is also influenced by specific determinants, such as tourism, infrastructural development, access to sanitation and obviously house prices. (Rodríguez and Bustillo, 2010; Fereidouni and Masron, 2013). In contrast to general FDI, financial sector development is of less importance to FREI since it is less dependent on local financial and capital markets. This is especially the case in SSA, where there is relatively little use of real estate as collateral (Rotherberger, 2010).

Urban Africa's locational context

Although the post-Independence urbanization wave in SSA was partly triggered by rural-urban wage differences (Fay and Opal, 1999) and the lifting of restrictions on settlement in urban areas, its colonial history, lack of productivity in the agricultural and industrial sectors, resource booms, and internal conflicts have all created urban dynamics that differ from the rest of the world (Henderson et al., 2013; Jedwab et al., 2014; Obeng-Odoom, 2015). Most SSA cities have not been able to reap the potential of positive agglomeration externalities. It seems that in many SSA cities the equilibrium model of production and consumption is distorted and that negative agglomeration externalities outweigh the benefits of urban density. Therefore, many SSA cities currently do not function as the proverbial engines of growth (Henderson, 1974; Glaeser, 2014; World Bank, 2008), instead exhibiting "Malthusian urban dynamics", where cities are not able to take advantage of agglomeration economies due to congestion effects and weak economic productivity (Castells-Quintana, 2015). Only when the majority of urban populations have access to transportation, employment, water, electricity and sanitation, can the growth-enhancing benefits of agglomeration outweigh the costs (Henderson, 1974; Castells-Quintana, 2015).

Today, many SSA cities have a bewildering mixture of customary, formal private, state-owned, and informal land and housing tenure systems, often blended within the same city or even urban neighbourhood

Current urban housing and services deficits and the subsequent mushrooming of informal settlements (slums) pose significant barriers to formal real estate markets. Informal real estate markets affect formal ones in SSA (and vice versa) by limiting land supply, eroding municipal tax-bases, and serving as both an affordable and profitable alternative to formal sector development (Marx et al., 2013; Brueckner, 2013; Brueckner and Lall, 2015). Informal and formal market competition increases the “informality [price] gap” (Brueckner, 2013). Although the overall formal market size in SSA might be relatively small, the inelasticity of these markets, combined with rising demand, has rewarded investors with high returns on investment.

International development agencies have advocated further privatization and formalization of land and housing ownership. However, attempts to formalize property transactions seem to have had limited success and some have even questioned how positive its effects are (Rakodi and Leduka, 2002; Payne et al., 2009; Mooya, 2011; Marx et al., 2013; Brueckner and Lall, 2015).

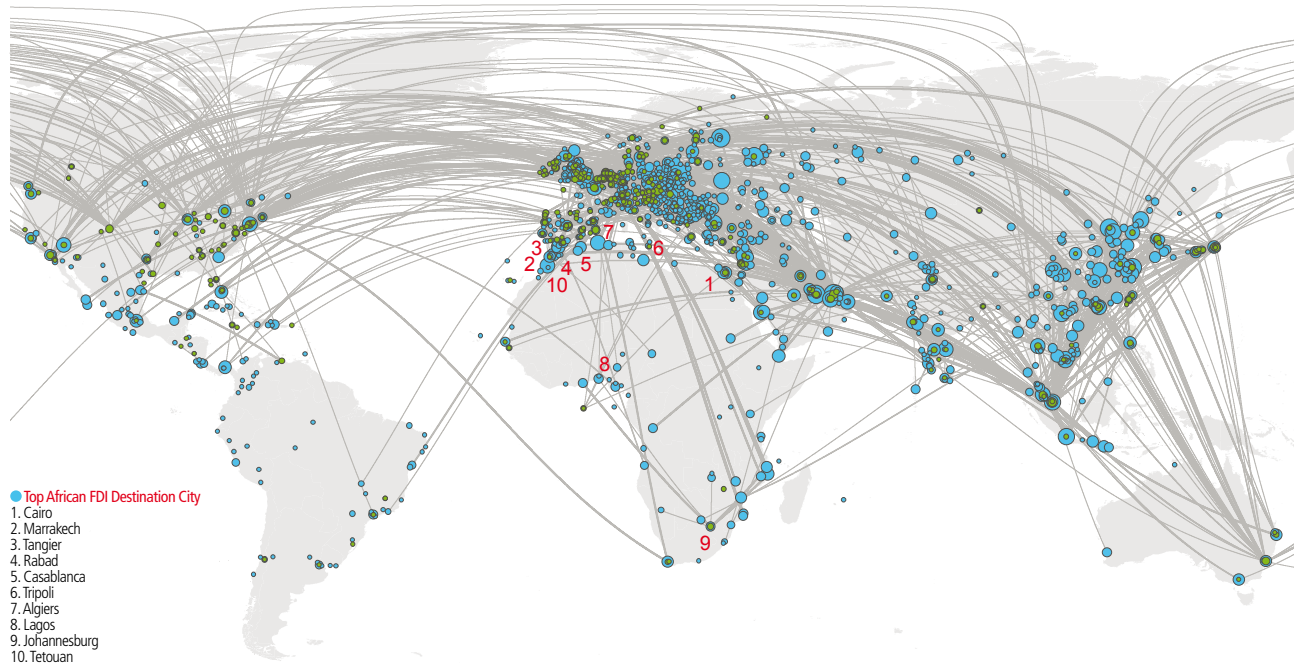
Today, many SSA cities have a bewildering mixture of customary, formal private, state-owned, and informal land and housing tenure systems (UN-Habitat, 2010), often blended within the same city (Selod and Tobin, 2013; Brueckner and Lall, 2015) or even urban neighbourhood. This opaqueness of real estate markets, ambiguous titling systems, and the notorious inefficiencies of state-encumbered land, are likely to limit the potential amount of inward FREI. Furthermore, often excessively cumbersome, complex and lengthy procedures for property registration and obtaining construction permits can further deter FREI, especially in countries with high currency risks (Malpezzi and Mayo, 1997; De Soto, 2000). De Soto found that, in Egypt, it can take 77 bureaucratic procedures, involving 31 private and public agencies to develop a project on state-



London, Cairo and Tunis are the top recipients of FREI with London accounting for 15% of total capital invested globally

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Map 6.1. The global geographic network of Foreign Real Estate Investments (FREI) (2006 - 2014)



Blue nodes: total inward FREI at city level Green nodes: total outward FREI at city level
Source: Van Gils, Van Haaren and Wall, 2017, fDi Markets and WB World Development Indicators

owned land (De Soto, 2000). In addition to such procedural barriers, supply restricting regulations like urban growth boundary and density controls, rational as these may be in the larger picture, put an indirect fee on top of construction costs which arguably limit the quantity of investments (Cheshire et al., 2012 and 2014; Brueckner and Lall, 2015). These “implicit taxes” can decrease supply elasticity and thereby inflate prices (La Cava, 2016; Buckley and Mathema, 2007; Cheshire et al., 2014).

An important nuance is that different aspects of urban planning can impact differently across regions. For example, in low-density urban areas of Western Europe, density restrictions negatively impact on FREI attraction because of implicit taxes (Cheshire and Hilber, 2008). Perhaps this has the opposite effect in SSA, where excessive population density can cause negative agglomeration externalities, such as limiting the supply of developable land, which deters investment (Castells-Quintana, 2015; Brueckner and Lall, 2015). Either way, urban planning regulation can be expected to impact investment patterns. In this light, FREI factors can have different impacts in different regions, and local characteristics typically have a relatively large influence on FREI flows (Laposa,

2007; Holsapple et al., 2006; Fereidouni and Masron, 2013; Rotherberger, 2010). In summary, it can be concluded that international economic activity, the macroeconomic environment, locational factors, institutional factors and urban planning mechanisms all influence FREI to one extent or another.

The geographical distribution of FREI

The total inflow of FREI into global cities in terms of US dollar values is unevenly distributed (see Figure 6.1). It was found that London, for example, attracts approximately 15% of total global FREI capital and that the top 30 cities of the world account for roughly 90% of total FREI flows. London, Cairo and Tunis form the top three global recipients, in descending order, and attract approximately 33% of FREI capital. The four SSA cities in our sample, attracted a relatively small amount; less than 1% of the total FREI flows. However, concerning employment generation, it was found that worldwide, it is better to attract a higher number of investments, than a higher capital value of investments. For example, Bucharest received over 104 investments at a total value of approximately USD15.6 billion, that generated more than 210,000 direct

Table 6.1.
Determinants of foreign real estate investment (FREI)
in African countries (2006-2014)

Variables	Negative Binominal Model (Africa) Total FREI
Regulatory quality	++
Freehold landownership possibility	0-
Rigid town planning policies	---
Days to obtain building permit	---
Urban population size	++
Urban growth rate	+
Total FDI	+++
Control of corruption	++
Special economic zone	++

Source: Van Gils, Van Haaren and Wall, 2017, based on fDi Markets and various sources of indicators

+++ Very significant and positive relation
 ++ More significant and positive relation
 + Significant and positive relation
 --- Very significant and negative relation
 -- More significant and negative relation
 - Significant and negative relation
 0+ Not significant but positive relation
 0- Not significant but negative relation

jobs. During the same period, Tunis only received six investments, at a combined value of USD20.4 billion which generated only about 10,000 jobs.

The distribution of FREI into the African continent is highly skewed towards Northern Africa (Figure 6.1). Together, Algeria, Egypt, Morocco and Tunisia attracted approximately four times as much FREI capital as the remaining 49 African countries combined, from 2006 to 2014. A similarly skewed distribution of investments was found in other studies, with a concentration of FREI in the Casablanca-Tripoli and Nile FDI-Corridors (Adb et al., 2016). This region is not only in an advantageous position in terms of FREI but also receives the highest value of total FDI. This is likely due to its cultural affinity to the Arab States and proximity to Europe, while these Northern African countries all have strong economies, superior infrastructure and well-developed human capital, which make them attractive for investment. Large and growing populations and consequential housing demand give rise to new cities thereby boosting FREI (see also the case study of Cairo in Part C of this report).

In Online Appendix 6.3 It is evident that capital flows in terms of US dollars (value) are more concentrated than the actual number of investments (count). In terms of FREI, count investments are more widely spread in other African investment corridors, such as the Gauteng-Maputo and the Accra-Lagos Corridors. The distribution and concentration of the

number of FREI in SSA (Online Appendix 6.3) show a concentration in the Accra-Lagos and Gauteng-Maputo Corridors. The number of FREIs have a similar clustering, and the emergence of a new corridor that stretches from Pemba to Lake Victoria can be seen. Incidentally, the two SSA cities with the highest FREI, Luanda and Djibouti, are located outside Africa’s main investment corridors (Adb et al., 2016). Luanda can be explained by inflated real estate prices in the wake of oil exploration. Djibouti’s FREI is arguably due to tourism, which is one of its main growing economic sectors, generating around 63,000 arrivals per year, due to its attractive beaches, islands and climate. It is also situated on one of the most intensive shipping lanes in the world and consequently has a flourishing port, which requires specific types of real estate.

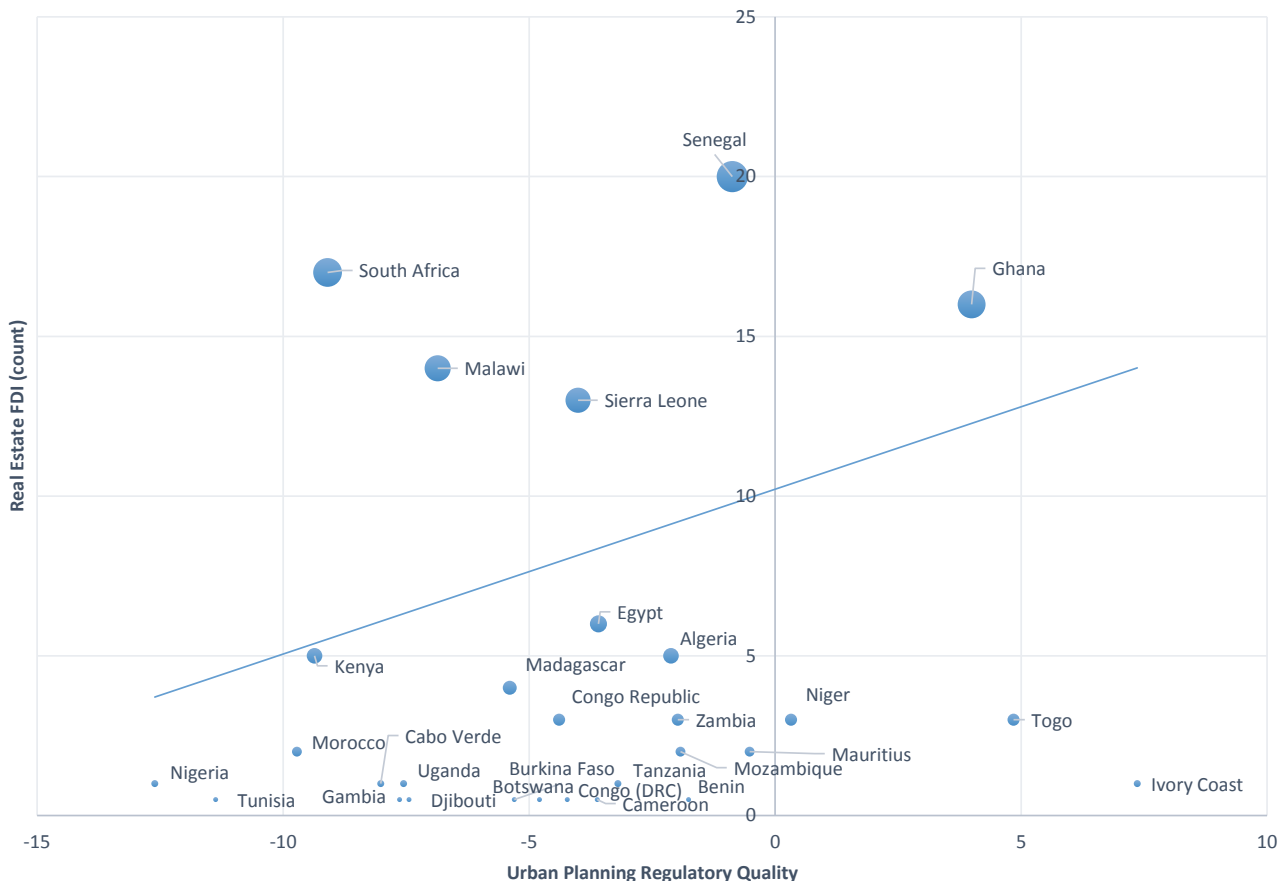
The determinants of FREI

Our global and African research findings show that total FDI serves as a strong determinant of inward FREI, whereas trade barriers have a negative impact (see Map 6.1 and Online Appendix 6.2). These outcomes emphasize the importance of economic internationalization and integration for FREI. This is in line with theories such as the Uppsala model (Vahlne and Johanson, 2013), World and Global city network concepts (Friedmann, 1986; Sassen, 2005; Wall and van der Knaap, 2011), as well as different theories related to competitiveness and agglomeration effects (Jacobs, 1969; Duranton and Puga, 2004; Cheshire et al., 2014). As expected, our analysis confirms that urban population size and growth positively influence FREI attraction because this creates demand for housing and provides larger market sizes for investors (see also the Cairo case study in Part C of this report).

Furthermore, better regulatory quality increases the prospect of attracting FREI as indicated by the very significant negative signs of rigid town planning policies and number of days to obtain building permits. So well-governed land and property titling processes are more important than whether the land can be owned as freehold.

Both rigid town planning policies and the time required to obtain a building permit have a significant negative impact on the amount of FREI attracted (see Figure 6.1 and Online Appendix 6.2). This is in line with authors who argue that town and country planning acts set inappropriately high

Figure 6.1. FREI (count) and urban planning regulatory quality in Africa (2006-2014)



Source: Van Gils, Van Haaren and Wall, 2017, fDi Markets and WB World Development Indicators

standards vis-à-vis the income levels across Africa and that this planning disjunction is related to poor economic performance and informal settlement (slum) formation (Mabogunje, 1990; Obeng-Odoom, 2015; Collier and Venables, 2013; Brueckner and Lall, 2015). Land registration in Africa is a cumbersome and expensive process. Land grabbing, inefficient land administration, poor documentation, lack of transparency, low capacity and demand for land surveyors are the main obstacles to improving land governance (Lall et al., 2017). The case study of Kigali in Part C of this report shows that administrative and institutional reforms have put Rwanda among the top countries for ease of doing business and, as a result, the country attracted increasing amounts of investment in past years. The Rwanda Development Board was established in September 2008 as a specialized entity for fast tracking development activities and assisting foreign investors in establishing

their businesses in Rwanda through information provision and easing administrative barriers.

It seems very plausible that a precarious balance in the regulation of urban development is required to attract investments. While basic planning regulations reduce the chance of not receiving any investments at all, it can also limit the amount attracted. The conclusion is that regulation should be less complicated, more transparent, appropriate for the local context and limited to the bare necessity. Urban plans and planning institutions are often ineffective across Africa because most of the regulatory codes and planning models are inherited from colonial regimes or imported from other developed countries and are not always appropriate for Africa today. In several African cities, it is economically not feasible for households and firms to formally acquire land because of inefficient regulation. Instead, alternative land sources are sought, and found, in the informal sectors (Lall et al., 2017).



Djibouti's flourishing port and attraction to tourists explain its high position for FREI in terms of cities in Sub-Saharan Africa

This research has focused on FREI attraction because it can be a beneficial source of capital for urban real estate development in SSA. FREI creates a relatively large number of jobs, can enhance economic growth and is a direct investment into the built environment. FDI in other sectors has the largest positive and significant impact on inward FREI, both in global and SSA cities. Trade barriers have been shown to have a negative effect on FREI attraction, which emphasizes the importance of international economic activity in the pursuit of FREI attraction. Though contradictory to general FDI theories, our global city study has shown that somewhat less-transparent environments, combined with lower levels of technological and financial development, can have a positive impact on direct FREI attraction. These results indicate that direct FREI, in contrast to indirect FREI (Lieser and Groh, 2013), is a creature of market imperfections (Kusiluka, 2012; Rotherberger, 2010). Lower levels of transparency may provide

preferential access to profitable markets (Salem and Baum, 2016). However, the results also indicate that a lack of transparency and other market imperfections deter FREI attraction and that there is a limit to the conduciveness of such imperfections.

In the African analyses, higher income levels have a very small though negative impact on the amount of FREI attracted, which contrasts with the literature on general FDI and indirect FREI (Lieser and Groh, 2013). However, a higher level of income does significantly reduce the chance of not receiving investments. It implies that direct FREI is attracted by niche markets with a fair level of institutional, infrastructure and economic development where indirect FREI is not (yet) a reliable or functional alternative, because of a limited level of technological and financial development.

The special economic zone (SEZ) development model seems to work well for increasing FREI and FDI in general (Zeng, 2015). SEZs are designated areas where



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regulations differ from other areas in the same country. These regulations mostly concern the extension of fiscal and other incentives to help attract FDI. This model appears to work particularly well in SSA, where SEZs offer investors an attractive and well-regulated environment in otherwise opaquely regulated countries. More integrated strategic approaches than those currently applied are desirable. SEZs should be integrated in and complementary to the host city rather than draining investment from the host city and other areas (Watson, 2013; Zeng, 2015). In particular, governments should formulate more comprehensive policies and rules regarding SEZ land allocation and, notably, the compensation of existing occupiers of such land. All too often, the poor are simply displaced with little or no compensation by large land transactions for the creation of SEZs. Countries with high urban growth rates could focus on increasing investments by means of SEZs but should be wary of short-term gains that are not balanced with the city's longer-term interests.

Regulatory quality proved more important in the Africa analysis. This reveals a similar indication of 'getting the basics right' when it comes to the attraction of investment (Angelopulo, 2015; Tibaijuka, 2009; Dasgupta et al., 2014; Glaeser, 2014). However, restrictive urban planning environments do seem to limit the amount of FREI attracted, even for areas that have their 'basics right'. This is confirmed by other research (Mabogunje, 1990; Cheshire and Hilber, 2008; Alterman, 2013; Collier, 2013; Cheshire et al., 2014; Obeng-Odoom, 2015). So, even though basic regulations are necessary to enable FREI attraction, too stringent planning regulations can limit the amount attracted and regulation should be kept to a bare minimum. According to *The State of African Cities 2010*, relaxing planning standards will improve formal land markets in Africa, if only by reducing the number of people seeking alternatives in informal markets. That report recommends effective urban planning, formalized land markets and clear property rights for an efficient development path for African cities (UN-Habitat, 2010). *The State of African Cities 2010* further states that minimum plot-sizes, land zoning which limits the type and intensity of land use, limitations on floor-area ratio, and land subdivision ratios of developable and saleable land in new greenfield developments are the most crucial regulations. Urban planning audits can be used to determine which regulations require revision to achieve density and urban form according to the rate of urbanization (The World Bank, 2010).

Conclusion

Our research results emphasize the general importance of planning and regulating urban growth and that, at least for stimulating FREI attraction, urban centres should invest in basic infrastructure before attending to more high-tech infrastructure such as broadband access. More importantly, urban centres with high-growth rates should also "build for growth" (Angel et al., 2011) rather than excessively pursuing the "compact city" concept.

An effective city coordinates investment in infrastructure, enterprise investment in productive capital and household investment in housing (Collier, 2013). To facilitate these investment processes, a city must have clear, minimal, efficient, transparent and equitable regulations and procedures governing urban development processes.

Part B | Chapter 7

FDI and the African Food Security Paradox

By Ronald Wall, Dorcas Nyamai
and Akua Asubonteng

Africa suffers from a food security paradox in that there are insufficient food supplies in a continent with a very high potential for food production
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One-third of all child deaths globally are due to malnutrition

©Francovolpato

Food security exists when all people at all times have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996). The concept covers four dimensions: a) physical availability of food (supply and demand); b) economic and physical access (affordability and preference); c) food utilization (nutrition); and d) food stability (sustainability) over time. Several factors, such as low productivity, economic shocks, political instability and poor weather conditions can affect these dimensions (FAO, 2008).

Food insecurity is one of Africa's ruthless ails associated with prevalently high levels of poverty and health problems that have persisted for decades. Acknowledging the lack of resources in the food sector, African governments are increasingly encouraged to attract FDI to improve food security. The present section explores the African food security paradox of insufficient food supplies in a continent with a very high food producing potential. To this end, this study examines the bearing FDI has upon the Food Security Index (FSI) by comparing its

impact at the global level to that of Africa. The FSI is a normalized score based on 28 unique indicators developed by the Economist Intelligence Unit, using three parameters: availability, affordability, and quality of food (nutrition). These three food security parameters are generally accepted in food security literature on African countries.

To this end, the effect of total FDI and food FDI (investments particularly in the food sector) upon the overall FSI is tested at both geographic scales. The same analysis is carried out at a deeper level for the FSI sub-indicators affordability, availability, and quality/safety. For all statistical models, control variables were also included, i.e. agricultural exports, improved sanitation facilities, agricultural import tariffs and the Food Production Index.

Africa has a comparative advantage in the global economy with its vast tracks of arable land, seasonal rainfall and semi-skilled labour in agriculture. Despite these advantages, the continent has struggled with food insecurity for decades. Emerging and pressing threats to food security have been amplified by poverty, rapid urbanization, population growth,

food price-hikes, conflict and civil strife, misguided policies, weak institutions and failing markets, climate change, and reduced productivity and investments (Kwasek, 2012; *Africa Human Development Report*, 2012; SFIW, 2015).

When faced with high food prices, poor families cope by eating cheaper but often less nutritious food. This can have severe impacts on the social, physical, and mental well-being of millions, especially young people. One-third of all child deaths globally are attributed to malnutrition (World Bank, 2010). This is particularly alarming when considering that youth constitutes more than half of Africa's entire population. As in other parts of the world, Africa's food security will require

When faced with high food prices, poor families cope by eating cheaper but often less nutritious food. This can have severe impacts on the social, physical, and mental well-being of millions, especially young people

a sustained and sustainable increase in agricultural productivity, income generation and production of nutritiously safe and affordable food. To this end, the African Development Bank, in 2015, launched its "Feeding Africa" strategy which aims at managing African food self-sufficiency by 2025, through agricultural transformation (UNECA, 2016).

In recent decades, the African economy has started its transition from a predominantly agrarian to a more services-oriented economy. At the same time, Africa has become a preferred investment destination of investors in Europe, North America and, increasingly, the Middle Eastern and East Asian emerging economies, e.g. China and India. This is expected to grow further (McMichael & Schneider, 2011). Although the impact of FDI on food security is unclear, if done correctly, it can contribute to a sustainable solution that secures food while also generating new and additional employment and wealth.

The number of undernourished people in Africa is steadily rising, which appears to contradict the positive direction of FDI growth in Africa. This raises questions about the impacts on food availability,

affordability and quality, on the one hand, and multinational corporations' (MNCs') activities and FDI on the other. Seeking answers, empirical studies were carried out to test possible relationships by estimating the relationship between food security (dependent variable), and FDI (independent variable), in panel regression models.

Distribution of FDI and food security across African countries

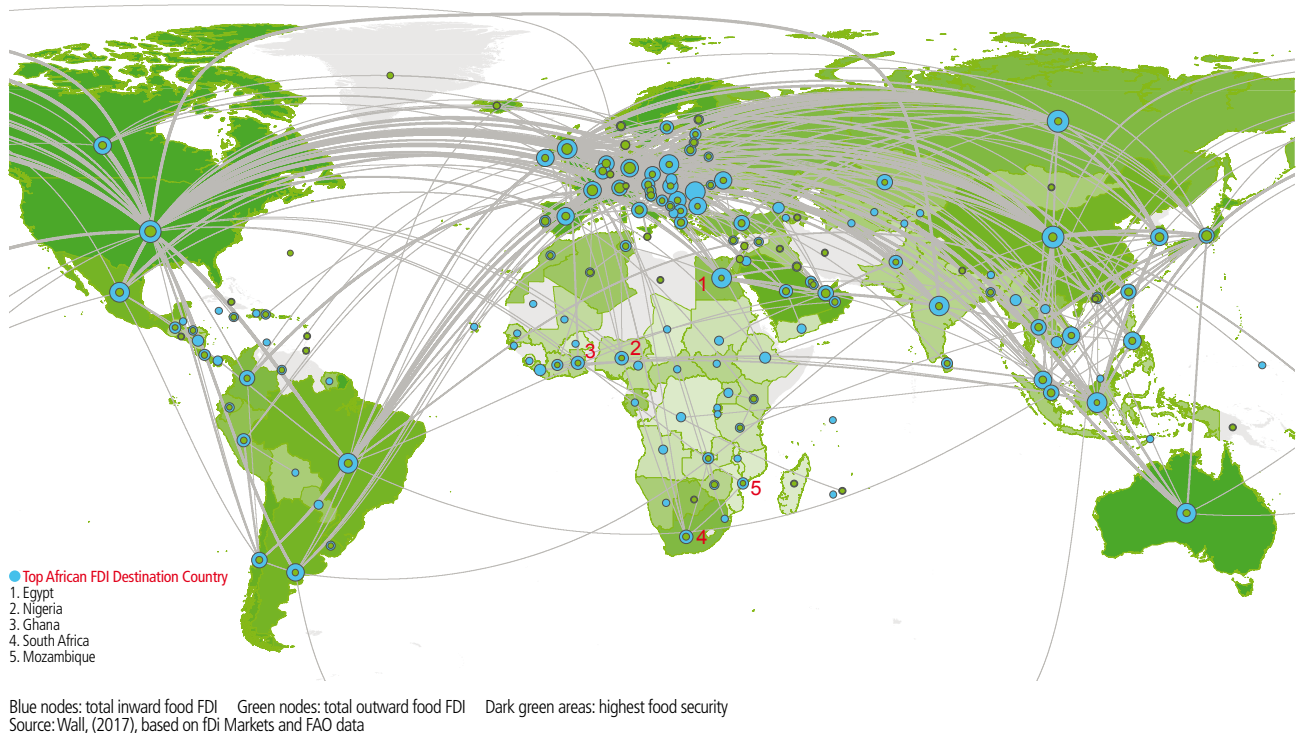
FDI serves as a good measure of how a country has become globally integrated and how attractive it is for international business and trade. In Online Appendix Part B, 7.3, the regional variation within Africa is evident. Northern Africa receives the largest share of total FDI, although the job conversion rate (jobs generated by USD1 million of FDI) of 1.43 is below the African average of 1.91. Northern Africa is followed by Western and Eastern Africa, whereby the latter shows a higher job conversion ratio when compared to other African regions, except for Southern Africa. Although it receives the least capital, Southern Africa has the highest investment-job conversion rate (2.84).

Map 3.1 presents inward food FDI and Food Security Index (FSI) levels across the world. Most African countries have low levels of FSI, whereas North American, Australian and the EU countries are the most food secure in the world. Within Africa, Egypt is the largest recipient of food FDI, followed in descending order by Nigeria, Ghana, South Africa and Mozambique. Perhaps not surprisingly, Egypt also has the highest food security in Africa. But other factors clearly play a role as well, considering that Nigeria and Ghana have both received strong food FDI, but are nevertheless among the least food secure countries in Africa. Other countries with relatively high food security are Morocco, South Africa and Tunisia. A majority of African countries experience food insecurity, particularly the DR of Congo, Tanzania, Mozambique, Madagascar, Guinea, Côte d'Ivoire and Togo in descending order. These countries are followed by Mali, Niger, Chad, Sudan, Angola, Zambia and Malawi.

Food security at the global scale

Food security is a global concern. It is the second United Nations' Sustainable Development Goal (SDG) after poverty and these two topics are interlocked. It is known to be both a cause and an effect of conflict,

Map 3.1. Distribution of average food FDI and food security across countries (2012-2014)



population growth, droughts, rising food prices and poor agricultural practices (Maxwell, 1999; Naylor and Falcon, 2010; Altman et al., 2009). Since economic growth is a game changer of poverty and food insecurity, countries are adopting policies such as open trade and liberalization to promote growth, where FDI is considered an important means of increasing economic growth.

Online Appendix Part B, 7.2 shows the relationship between FDI and food security at the global scale. Firstly, both total FDI and food FDI do not significantly influence the FSI, nor its sub-indicators affordability, availability, and quality (see columns 2 to 8). This may be due to heterogeneity in the data (too many different country-specific influences e.g. policy, language and culture). Nonetheless, other factors such as agricultural exports, improved sanitation facilities (cleanliness of handling, processing and packaging of foods), agricultural import tariffs, and the Food Production Index, do have a significant impact on food security at the global level.

Secondly, in model 1 (Online Appendix Part B, 7.2, column 2), improved sanitation facilities have a highly significant effect on improving global food security. This links higher cleanliness and

hygiene levels to higher food security levels because improved sanitation is associated with better health, productivity and incomes. It is particularly important for the food processing industry, whether it concerns the processing of dairy products, meat, vegetables or fruits. Looking closer into the FSI sub-indicators, improved sanitation facilities particularly matter to the availability and quality/safety of food but they do not affect its affordability.

Thirdly, agricultural import tariffs show a positive significance on global FSI. This means that countries that are less reliant on imports from other countries, i.e. the more they produce their own food, are ensured higher food security. This is further supported by the fact that the only positively significant sub-indicator is affordability. This suggests that agricultural food tariffs deter competitive foreign products and stimulate local competition for food production and, consequently, affordable food prices. Agricultural import tariffs do not show any significance to the availability and quality/safety components of food security.

Fourthly, the Food Production Index does not seem to have a significant effect on the FSI, while agricultural food exports evidently decrease the availability of food and hence raise food insecurity. This is because food

exports can be at the expense of local food supplies e.g. food crops exported for bio-fuels or animal feed. This finding is further supported across the sub-indicators of affordability, availability, and quality/safety that all reveal negative, significant impacts. Since the 1980s, agricultural imports have been increasing faster than exports, reaching USD47 billion, and leading to a deficit of USD22 billion (FAO, 2011). The conclusion is that the

The more a country disproportionately exports crops, the less food will be locally available and affordable. This in turn impacts the quality and safety of food products

more a country disproportionately exports crops, the less food will be locally available and affordable. This in turn has an impact on the quality and safety of food products. However, these results do not suggest that food export is bad *per se*, but rather that care should be taken that food products are not exported at the expense of local populations. This suggests that once local populations are adequately provided for, surplus food exports will have a positive future effect on further prosperity.

Food security at the African continental scale

Next, the impact of FDI on Africa's food security is explored. Table 3.1 indicates that total FDI

significantly and positively impacts FSI in Africa, albeit that in terms of the FSI sub-indicators this relates specifically to affordability, and to a lesser degree quality/safety. This conveys the generally accepted view that increased FDI into African countries contributes to general productivity and income level increases which, in turn, enables populations to better afford food and demand higher levels of food quality and safety. Amongst African countries, Egypt showed the highest food affordability and, perhaps not surprisingly, it is the country that receives the largest amount of FDI in Africa in terms of value. It is followed by Nigeria, Angola, South Africa and Kenya (see Figure 3.1). On the other hand, countries such as Niger, Burundi and Guinea receive minimal amounts of FDI, while having Africa's lowest food affordability levels.

Food FDI into Africa has an insignificant effect on FSI. This is probably because food investments are aimed at export destinations outside of Africa, rather than at stimulating local food security. This finding is confirmed by the agricultural exports indicator, which negatively influences the FSI sub-indicator availability. It is also evident from Table 3.1 that improved sanitation facilities, like total FDI, positively affects FSI and its sub-indicators affordability, availability, and quality/safety. Hence, the level of cleanliness and hygiene contributes to the improvement in food security. Similar to the results of the global analysis (Online Appendix Part B, 7.2), agricultural import tariffs also positively contribute to improving food security. This is arguably because

Table 3.1.
Relationship between FDI and food security in Africa

Variables	Food Security Index	Food Security Index	Affordability	Affordability	Availability	Availability	Quality and Safety	Quality and Safety
Total FDI	++		++		0-	0-	+	
Food FDI		0-		0-		0-		0+
Agricultural exports	0-	0-	0+	0+	-	--	0-	0-
Improved sanitation facilities	+++	0+	++	0+	++	++	+++	+++
Agricultural import tariffs	++	0+	+++	+++	0+	0+	0-	0+
Food production index	0+	++	0+	0+				

Source: Wall, Nyamai and Asubonteng (2016)

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation

tariffs keep out competitive foreign products and consequently stimulate local competition in food production. As shown by the FSI sub-indicators, this particularly affects food affordability.

To verify the degree to which African countries import and export food, a separate analysis is included in this study, which explores the imports and exports of various food products between countries of the world. The example (in Online Appendix Part B, 7.4) shows the global trade geography of wheat (2007-2011). Africa, like many other regions of the world, imports a lot of wheat (green nodes) but it hardly exports any, whereas, in highly food-secure regions like Europe and North America (see Map 3.1), both wheat export and imports are strongly present. This is arguably because Africa's agriculture sector is generally not advanced enough to be globally competitive, and where food

production today often costs more to produce at home. In many cases, it is cheaper to import food.

Based on the above, it is arguable that smaller import-export trade differences ensure higher food security. Besides wheat (Online Appendix Part B, 7.4), African countries are generally also dependent on other important grain imports like rice and corn, as well as vital meat products (essential proteins) e.g. chicken, beef and pork. Disproportionate imports of such vital carbohydrate and protein products is, quite obviously, a likely determinant of food dependency, vulnerability and insecurity. Furthermore, both at the African (Table 3.1) and global scales (Online Appendix Part B, 7.2), agricultural import tariffs positively improve food security, particularly the sub-indicator affordability. In other words, stronger import regulation will safeguard domestic food producers, stimulate local food production and ensure greater



Cleanliness and hygiene promote food security because a lack of sanitation causes disease and affects labour productivity

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food affordability. In turn, this can lead to surplus food productivity and stimulate exports. Once a trade balance is achieved, the food security of many African countries will expectedly rise.

The chart in the in Online Appendix Part B, 7.5, shows a positive relationship between FSI and improved sanitation facilities. Algeria, Egypt, South Africa and Tunisia are the leading African countries in terms of food security and improved sanitation, whereas Chad, Madagascar, Nigeria, Sierra Leone, Tanzania and Togo score the lowest on these measures.

Conclusions

Food security is a highly relevant topic for Africa, especially as the number of undernourished people continues to rise (FAO, 2015). Africa also faces an increasing demand for affordable, nutritious food for its rapidly growing population. Not only is the

continent food insecure today but future generations remain at higher risk. Although governments and international agencies have greatly influenced food security, due to reduced resources input by national and international partners alike, the agricultural sector has lost public expenditure priority to other sectors (World Economic Forum, 2015). FDI could fill this investment gap.

The current study explores the impacts of FDI upon food security at the global and African levels. Positive, ambiguous and even negative impacts of FDI on host economies have been found. Such contradictions have also been found by other studies. Studies on food FDI and its impacts on food security have revealed similarly contradictory results. Our results show that at a global level, neither total FDI nor food FDI have a significant impact on food security, nor on its sub-components affordability, availability and food quality/safety. Control variables, such as

Figure 3.1. The relationship between food affordability and total FDI in Africa (2012-2014)



Source: Wall, Nyamai and Asubonteng, 2016, fDi Markets and WB World Development Indicators

agricultural exports, improved sanitation facilities, agricultural import tariffs, and the Food Production Index, all have a substantial impact on food security.

Enhanced sanitation facilities have a positive and significant impact on improving FSI at the global level. Cleanliness and hygiene promote food security because a lack of sanitation causes disease and influences labour productivity and income. Sanitation is also important in the food processing industry. Improved sanitation facilities also improve the availability and quality/safety of food but do not affect the affordability of food. This study also shows that agricultural import tariffs increase food security because less dependency on imported food encourages domestic food production and leads to higher food security.

On the other hand, increasing agricultural exports has a negative effect on food security and its sub-indicators affordability, availability, and food quality/safety. This means that increased food exports by foreign firms do not lead to local food availability and affect the affordability of food, with negative implications for the quality and safety of these products for local populations. Food FDI should in future become more geared towards partnerships and economic inclusion and should increasingly target local markets.

In the case of Africa, total FDI significantly and positively impacts FSI, particularly in terms of affordability, while it relates less to the quality and safety of these products. Similar results have been found across various local municipalities in South Africa, in which total FDI proves to alleviate hunger and food insecurity (Dunstan et al., 2018). Countries such as Angola, Egypt, Kenya, Nigeria and South Africa show a stronger relationship between FDI and affordability with larger values of inward FDI and higher affordability of food (see Figure 3.1). Because the manufacturing sector (which includes food processing) attracts the largest share of FDI in Africa, it also generates the highest number of jobs. It can therefore be inferred that more FDI in African countries because of the higher productivity and incomes it generates makes food more affordable and increases demand for better food quality and safety. FDI in different sectors also has indirect impacts on food security through spill-over, whereas FDI in agriculture improves food security in developing countries by increasing agricultural production. It also increases local knowledge and technology transfers.

In the case of Africa, the study revealed contradictory results in which food FDI does not

significantly affect FSI. However, the negative signs indicate that if the relationship were to be significant, the impact would most probably be negative. The logic here is that a large share of Africa's food FDI goes towards agricultural land acquisition, which negatively impacts local economies due to related social, economic and political conflict. Studies have shown that 115 million acres of agricultural land have been leased to investors worldwide (international land outsourcing for food exports) and that the bulk of this is in Africa (Land Matrix, 2016). Hence, food investment in Africa has become a 'resource-seeking production and export platform' venture that generally does not support local food availability. Food production by investors (MNCs) is predominantly tailored towards crops (e.g. fruits, oilseeds, coffee, and cocoa) with higher economic value on the global markets. These crops are generally not the staple foods of host countries. This explains the paradox of food shortages in a continent of high food security potential.

Many African subsistence farmers are displaced by international land outsourcing and have little alternative but to migrate to urban centres to seek livelihoods

Many African subsistence farmers are displaced by international land outsourcing and have little alternative but to migrate to urban centres to seek livelihoods (UN-Habitat 2008, 2010 and 2014). Since these migrants typically lack the skills for employment in urban-based manufacturing and service industries, they are more likely to add to the cohorts of the urban unemployed or end up in the informal sector than be absorbed into productive formal urban activities. Moreover, food FDI is usually aimed at exporting food products outside Africa with negative outcomes for local food security. This is supported by our finding that agricultural exports can have a negative significance for food availability. Higher food exports from African countries to the world leads to lower availability of food in local markets and can affect overall food security.

Consequently, African policy on food exports should encourage more sustainable forms of trade that do not come at the expense of local communities. This finding, however, is contrary to the findings in some



When food is secure locally, food-related FDI can make the agro-food sector a key contributor to GDP as countries like Argentina have shown

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other studies that investments into the agricultural sector significantly increase food security in developing countries. Our findings support the argument that food FDI, particularly in the agriculture sector, fails to benefit local agriculture because such investments are all too often characterized by highly mechanized production, limited employment creation, poor working conditions, lack of labour rights, fresh water depletion and the widespread use of chemicals (some of which have long been prohibited in other economies) with the associated contamination of the environment. Hence, it is important to realize that great care has to be taken in comprehensive food policy formulation by African nations to reduce the above inherent risks and also to ensure that host countries should have sufficient capacity to absorb new technology and know-how to better benefit from food FDI inflows.

Recommendations

General

Although it is recommended that African governments promote the attraction of FDI, some caution is warranted. Food FDI does not have a significant relationship with food security because food MNCs control these markets and typically produce most for export with little spill-over into local development. Therefore, any policy to attract food MNCs should also be aimed at local markets, technology absorption, cooperation with local firms, and social inclusion.

The findings recommend a two-way strategy to improve the agriculture sector in African countries. Firstly, the strengthening and modernization of agriculture by adopting increased commercial but inclusive farming following sustainable agricultural practices and making agricultural policy and produce worthy of export.

Secondly, policy for promoting local agro-based industries, agri-business and their collaboration with MNEs is essential to create links between the agriculture and manufacturing sectors and across corporate scales.

FDI should be a complementary investment to fill the financing gap in the food sector in Africa, but undirected FDI should be avoided for achieving food security. Instead, food security must be achieved through promoting the entire food industry sector, from agricultural production to food processing and the associated value chains.

When food security is achieved locally and quality food is produced, food-related FDI can facilitate exports. Africa can learn from Argentina, Brazil and Chile, where the agro-food sector is a major contributor to GDP, employment and exports. African countries should focus on improving their agricultural productivity, food quality, as well as the diversity of agricultural products. Agricultural produce should be processed into diverse food products according to international standards and exported to international markets in order to gradually move African countries to high-value products for export (which are consumed by developed world markets). This will lead to the increased economic growth, competitiveness and integration into global economy. To this end, institutional and infrastructure development with FDI attraction is vital.

Urban agriculture and non-polluting peri-urban farming should be promoted in African cities drawing on the skills of displaced agricultural labour.

African food security policy should become more sensitive to looming urban food security crises by better accommodating local and international firms and smallholders, food innovation, food technology, food services, and food transport and logistics

African countries should increase their technology and knowledge-absorptive capacity in terms of human capital, infrastructure, technology and innovation levels, governance and quality of institutions to increase agricultural production and achieve food security.

Since improved sanitation helps improve FSI in terms of affordability, availability and quality/safety, it is recommended that cleanliness and the promotion of hygiene and prevention of disease by maintenance of sanitary conditions for foods, food handlers, and food processing, preparation facilities and equipment be encouraged throughout the production process and in accordance with internationally accepted standards of quality and safety. To expand the markets for unprocessed and processed food outside Africa, agricultural import tariff policy should control the import of staple diet food products and allow for local competition.



A coffee farm in Zambia. Food production by investors is targeted towards such crops that have a high economic value on global markets but are not staple foods for local markets ©Marek Poplawski

It is recommended that host countries be cautious that investment contracts and business models follow legislative and policy frameworks to maximize benefits and minimize risks so that foreign investment can be used to fill the investment gap in African countries with lower risk.

It is vital that regional and national institutions play a mediatory role in ensuring that multinational firms are jointly accountable for a nation's food security, as recently initiated in Liberia and Madagascar, and that all food stakeholders, especially small-scale farmers, participate.

Urban food security

Rural areas should become better linked to urban markets through closer proximity i.e. there needs to be more peri-urban agriculture and horticulture and more expedient long-distance connections and value chains.

African food security policy should become more sensitive to looming urban food security crises by better accommodating local and international firms

and smallholders, food innovation, food technology, food services, and food transport and logistics. This approach should not treat cities as isolated entities, but as elements in a larger concept to integrate their development within regional, and even global city networks (markets and production areas).

Urban-regional policy must more effectively address the food security dimensions of affordability, availability and quality, through promoting resilient, practical urban and peri-urban business models, including competitive food clusters (production and services, sectoral co-location, value-added food production, processing, packaging, logistics, transport, wholesale, retail, storage, cold-chain facilities, port development, and R&D stimulation).

Lastly, researching Africa is restricted by very limited data availability. Ready access to vital information about the food sector would inform investors, producers and traders, including about loopholes in the nature and needs of the sector. Access to open data should be routinely updated.

Part B | Chapter 8

Policy Instruments for Attracting FDI in Renewable Energy

By Ronald Wall, Stelios Grafikos,
Alberto Gianoli and Spiros Stavropoulos

President Lungu launched Zambia's Scaling Solar programme with IFC in 2016 to drive private investment rather than rely on donor-backed finance
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Wind farms in South Africa: wind investments have experienced steadier growth because wind is the most commercially viable technology

© Geoffrey Sperring

Global warming is rapidly rising on the agenda of policy makers in the developing south who are keen to improve environmental and economic sustainability. The industrialized countries have committed to supporting them by providing USD100 billion annually through the Green Climate Fund (GCF), established by the 16th conference of the parties (COP16). While foreign investment has great potential to help mitigate the current global environmental threat, its actual role has remained largely unexplored (Mahews et al., 2010; Peake and Ekins, 2016). Therefore, this study explores green foreign direct investment (GFDI), which in our case particularly refers to the renewable energy sector.

UNCTAD (2010) defines GFDI as the transfer of technologies, practices or products by transnational companies (TNCs) to host countries, through equity (FDI) and non-equity participation, so that their activities generate significantly lower greenhouse

gas emissions than would otherwise prevail in the industry under business-as-usual circumstances. GFDI already has a good track record of contributing to environmentally friendly industries, practices, technology and skills. There is increasing evidence that it would be more effective to promote private investment in developing countries, rather than the financing of individual clean energy projects by donor agencies (Buntaine and Pizer, 2015). There is a lack of public investment in renewable energy and private investment can be used to fill the investment gap. In addition to creating jobs, private investment can also lead to the transfer of knowledge, skills and expertise. Consequently, it is useful to identify the policies that are most effective in attracting GFDI.

There is a lack of research on this topic, especially studies with a global perspective using a large sample of countries. Therefore, this study seeks to demonstrate the extent to which national sustainable

energy policies have affected the attraction of GFDI into different advanced and developing economies. More specifically, this study investigates the geography of global GFDI networks and the policy instruments that influence this.

Green growth

Green growth is gaining visibility as a critical alternative economic development strategy (Stern and Damon, 2011). The concept was introduced in 2005 by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) to explore ways of encouraging a low-carbon sustainable development model for fast-growing Asian economies

The green growth model stresses the need for policies that bridge economic and environmental challenges and create economic payoffs that reflect the value of the natural resource base

(UNESCAP, 2005). More recently, the OECD (2010) formulated green growth as economic growth that ensures that the capacity of existing natural assets is protected. In other words, the green growth model stresses the need for policies that bridge economic and environmental challenges (Hammer et al., 2011) and create economic payoffs that reflect the value of the natural resource base (OECD, 2011).

Green foreign direct investment (GFDI)

A clear definition of green investment does not yet exist, as there is no theoretical consensus on this term (Inderst et al., 2012). However, studies refer to GFDI in terms of clean, sustainable, pro-climate investments. Golub et al. (2011) explored two hypotheses in their research on FDI and the environment. The first one concerns the 'pollution haven effect' referring to FDI that seeks higher returns in locations with weak environmental regulations. The second one is the 'pollution halo effect' whereby, in contrast, FDI spreads environmental best practices and technology. This study focuses mainly on the second hypothesis and the relationships between different policy instruments and the deployment of renewable energy.

The determinants that affect GFDI in host countries and, particularly, the decisions of multinational companies (MNCs) include: a) general policy frameworks - environmental, energy, climate and industrial policies; b) economic factors - the general determinants of FDI such as market seeking, resource seeking, efficiency seeking, and strategic-asset seeking factors; c) business facilitation - national and local policies that favour low-carbon investments; and d) costs of production - cost reductions resulting from material, resource and energy savings (UNCTAD, 2010; Hanni et al., 2011).

GFDI in renewable energy

Renewable energy has the potential to reduce greenhouse gas emissions and mitigate climate change through cleaner processes, products and services. GFDI in renewable energy (e.g. solar, wind, hydroelectric, geothermal and biomass-generated energy) has risen since 2003, due to international interventions to reduce GHG emissions (UNCTAD, 2010) but also because MNCs have become aware that greening their business and value chain can increase their competitiveness besides creating new markets for green products, services, technologies and innovation (Bisgaard et al., 2012). In this light, MNCs are already the dominant actors in renewable energy generation in advanced economies.

More than half of all GFDI projects so far have taken place in Europe because of the EU's commitment to renewable energy policies. Between 2004 and 2010, Europe (Denmark, Germany, Italy and Spain), North America (Canada and the USA) and Asia (China and Japan) were the largest GFDI investors in renewable energy. Nonetheless, in recent years, developing economies have steadily attracted more GFDI than developed economies. Between 2003 and 2010, China, India and Malaysia emerged as favourite destinations for GFDI in renewables. In 2010, China actually invested more in renewable energy than Europe and became a world leader in the production of photovoltaic modules and wind-power equipment. Latin America and the Caribbean became favoured destinations for renewable energy in 2009 and 2010. (Eyraud et al., 2011; Hanni et al., 2011; UNCTAD, 2010).

Wind power represented about half of the total GFDI flows between 2004 and 2010 (Eyraud et al. (2011)). Wind investments have experienced steadier growth because wind is the most commercially viable renewable energy technology, and due to its technological maturity, lower risks and widespread policy support.

Policies for GFDI in renewable energy

Many international, national and local renewable energy promotion or facilitation policies have been introduced to reduce greenhouse gas (GHG) emissions and mitigate climate change, improve energy security, and foster green growth by stimulating the creation of green jobs and innovation (Eyraud et al., 2011). Promotion and facilitation policies can help attract GFDI for renewable energy projects especially when they are combined with market-creation policies. Conducive policies include capital subsidies, grants, fiscal incentives, public investment, or loans (Hanni et al., 2011).

The choice of policies or policy combinations varies depending on the country's resources, its energy market maturity and its political context (Kitzing et al., 2012). The most common renewable energy policy categories are regulatory, market and public policies (POLIMP, 2014) with the following associated policy instruments.

Regulatory policies

- **Renewable Portfolio Standards:** Under this mechanism, electricity companies have to produce a certain share of electricity through renewable resources.
- **Net Metering:** Allows those who generate electricity to use that electricity anytime regardless of the time when they created electricity market policies.
- **Feed-in-Tariffs:** Policies to regulate the price of renewable energy, ensuring that it will remain stable. Feed-in-tariffs are the mechanisms which provide remuneration to the people who produce clean energy.
- **Financing Support:** One-time governmental payment to promote investment by covering a share or all of the capital cost.
- **Fiscal Measures:** Tax reductions for promoting renewable energy investments.
- **Energy Production Payment:** Payments by the government per unit of renewable energy produced.



Solar technologies are less mature than wind and more heavily dependent on regulatory instruments

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Regulatory policy obligations tend to be effective instruments to promote investments in renewable energy, confirmed by different studies (e.g. Bolkesjøa et al, 2014) demonstrating that these obligations and tendering have had a significantly positive effect on the development of bioenergy for power generation in European countries

- Renewable Energy Certificates: Tradable renewable energy quotas between companies and countries that exceeded their quota obligations and those that fell short. RECs are issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource.

Market policies

- Tendering: Defining the required volume of renewable energy by inviting interested parties to submit a proposal.
- Public Investments: Government investment in renewable energy projects.
- Carbon Tax: A tax imposed on the carbon content of fossil fuels.
- Emissions Trading Scheme: This regulates a market's clean energy production and consumption.

Regulatory policy obligations tend to be effective instruments to promote investments in renewable energy, confirmed by different studies (e.g. Bolkesjøa et al., 2014) demonstrating that these obligations and tendering have had a significantly positive effect on the development of bioenergy for power generation in European countries. Likewise, for policies that were designed to promote wind power generation in the United States (Menz and Vachon, 2006). However, for the diffusion of renewable electricity technologies, although having a positive effect, these policies may not be the most efficient instrument (del Rio and Bleda, 2012).

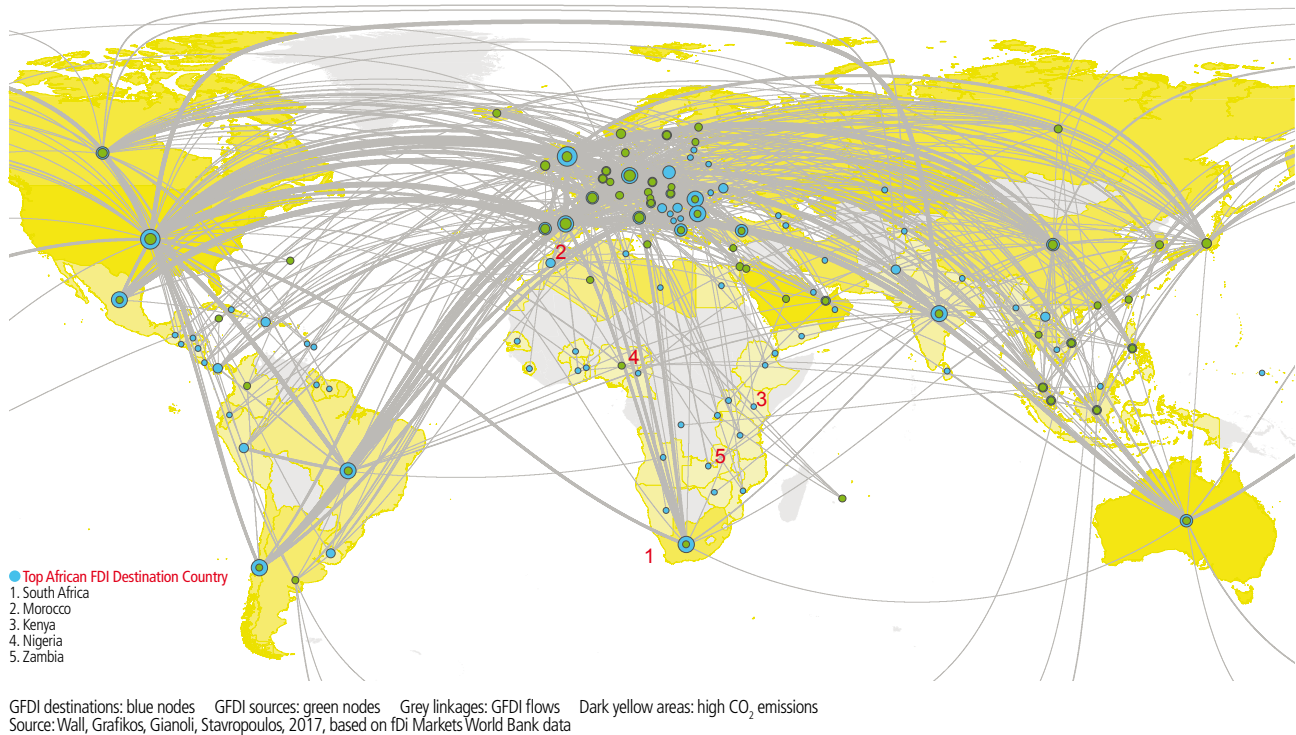
Market policies such as carbon taxes and tradable certificates have the potential to foster the investment and deployment of renewable energy (Helm, 2002; Rogge and Hoffmann, 2010; Smith and Swierzbinski, 2007). However, mixed evidence was found for market-based incentives, such as emission trading schemes

and green certificate schemes on renewable energy investments (Polzin et al., 2015). In relation to trading systems, there seems to be a sectoral differentiation as the study by Polzin et al. (2015), shows a positive influence on the wind and biomass sectors, but a negative one in the solar sector. This could be due to the fact that solar energy technologies are less mature and more diverse than wind, and are therefore more heavily dependent on regulatory instruments. The same applies to green certificates, which do not appear to strongly incentivize investments in solar technologies because of the lack of technological maturity and the low amount of certificates generated per capital invested, when compared to other sectors such as wind. According to Oikonomou et al. (2010), although the combination of maximum amounts of renewable energy policies are considered to provide more options and therefore have a wider effect, in practice the selection of combined policies needs to be careful, and should take into consideration trade-offs and different targets and not only economic criteria. Furthermore, regulatory policies are not enough to influence renewable energy investments, without the additional support of financial schemes to support project development costs, and to fill the market gap (Klessman et al., 2013).

Based on the theoretical background above, it is of interest to further investigate how different policies influence FDI in renewable energy for high, middle and low-income countries. To do this, a table with all policy instruments used in this report can be seen in Online Appendix 8.8, along with a correlation matrix for policies shown in Online Appendix 8.7. Furthermore, this study is based on fDi Markets data, concerning the renewable energy sector, as well as its sub-sectors solar, wind and biogas. The data has been geocoded for GIS purposes and aggregated at the country level for statistical modelling. The latter also required data on renewable energy policy, which was gathered from various sources. Econometric models were used to reveal the relationships between the data. For more on this see Online Appendix 8.6.

Findings

Map 8.1 shows the network of GFDI in renewable energies for the period 2005 to 2014. The bilateral investments between countries are indicated with grey lines. The thicker the line the more investment taking place between these countries. The blue nodes are country aggregations of investment received

Map 8.1. Global GFDI in renewable energy in relation to CO₂ emissions at the country level (2005-2014)

by a country in that period. The larger the node, the greater the aggregate investment. The green nodes represent the total outward investment from particular countries to other countries. It should be clear that the majority of renewable energy investments takes place between regions of the global north but fairly strong investment flows also occur between these northern regions and several countries in the Global South, particularly Australia, Brazil, Chile, Morocco and South Africa.

Map 8.1 further reveals that Africa hardly receives any GFDI for renewable energy apart from into South Africa, Morocco, Kenya, Nigeria and Zambia, in descending order. Nonetheless, four of these countries receive only small amounts of GFDI in renewable energy when compared globally, except for South Africa. The US, EU countries and India are the major renewable energy investors in South Africa, whereas Nigeria receives most of its investments from the US. For Kenya, it is Morocco and Zambia which are the key sources.

Map 8.1 also reveals countries' CO₂ emission levels in shades of yellow. The darker the colour, the higher the emissions. The highest CO₂ emissions are found in the more advanced economies, which also receive the highest renewable energy GFDI. This shows not only

that the advanced economies have a clear commitment to reducing their CO₂ emission levels but also that investing in the renewable energy sector is a profitable option in these advanced economies. In other words, it shows that environmental commitments and corporate interests can be successfully combined.

The ranking of countries by renewable GFDI is shown in Online Appendix 8.3, as well as a graph reflecting investments between 2005 and 2014 in Online Appendix 8.4.

Table 8.1 shows the statistical results of the study, in which it is seen that feed-in-tariffs (FIT) significantly and positively influence FDI attraction, both in total renewable GFDI, as well as the sub-sectors wind, solar and biomass. This result concurs with previous research that also found a significant impact of FIT on increasing renewable energy capacity in these sectors in OECD countries (Polzin et al., 2015; Eyraud et al., 2011). Other studies conducted in European countries also revealed clear evidence that FIT significantly affects the development of solar and wind energy (Bolkesjo et al., 2014). Our research also verifies similar findings by various other studies (e.g. Polzin et al., 2015; Verbruggen and Lauber, 2012; del Rio and Bleda, 2012 and Johnstone et al., 2010).



Investors have little confidence in public policy as it can be subject to reversal by newly elected administrations as was the case with the US President's withdrawal from the Paris Climate Agreement

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Table 8.1.
Policy impact on the attraction of renewable energy GFDI of different modes (2005-2014)

Variables	Total		Wind		Solar		Biomass	
	M1	S.E.	M2	S.E.	M3	S.E.	M4	S.E.
FIT (Feed in Tariffs)	++	0+	++	0+	+	0+	+++	0+
REC (Renewable Energy Certificates)					-	0+		
RPS (Renewable Portfolio Standards)	++	0+						
NEMET (Net Metering)							--	0+
FS (Financing Support)							+	0+
FM (Fiscal Measures)	+	0+			++	0+		
EPP (Energy Production Payment)	---	0+	--	0+				
TEND (Tendering)								
PUBLIC (Public Investments)	-	0+					--	0+
ETS (Emissions Trading Scheme)							++	0+
CT (Carbon Tax)	+++	0+			+++	0+	++	0+

Source: Wall, Grafikos, Gianoli, Stavropoulos, 2017, based on fDi Markets and various sources of policy data

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation



Renewable energy has the advantage of off-grid access that supports greater social inclusion

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Fiscal Measures (FM) such as tax incentives show a significant and positive impact on total renewable energy GFDI, as well as on the solar energy sub-sector. Whereas the findings confirm that, in general, fiscal instruments have a positive impact on the diffusion of renewable energy, this study goes beyond this conclusion by illustrating the impact each fiscal instrument has on increasing renewable energy FDI and its sub-sectors. Our findings show that carbon tax policies have a strong positive influence on renewable energy investments because carbon taxes add to the unit costs of electricity produced by fossil fuel-based energy technologies. This finding is particularly relevant for total GFDI and the solar and biogas sub-sectors but proved insignificant for the wind sector.

Other studies have found that carbon pricing has a statistically significant positive effect on investment (Eyraud et al., 2011). Our research further showed that energy production payments (EPPs) have a strongly negative effect on total renewable GFDI and the wind sector. In other words, EPPs do not spur attraction of FDI in both wind and total investment but rather influence these negatively. This seems counterintuitive but is explained by the fact that investors generally have little confidence in public policies since these may be reversed by newly elected administrations (Johnstone et al., (2010)). The withdrawal of the US from the Paris Climate Agreement after the 2016 elections is a good illustration of such a public sector U-turn.

In line with existing empirical evidence, renewable portfolio standards (RPS) have a positive impact on total GFDI attraction but not at the sectoral level. By contrast, both tendering (TEND) and net metering (NEMET) show neither relevance at the total nor sectoral levels, with the exception of net metering, which revealed a negative effect in the biomass sub-sector. Differences between these findings and those in previous literature may be due to our specific focus on foreign investment, rather than other types of renewable energy investments.

Lastly, renewable energy certificates (REC) and emissions trading schemes (ETS) show no statistical importance in total FDI attraction. In the sub-sectors, REC has no effect on wind and biomass, but a negative influence on solar whereas ETS has no effect on wind and solar, but a positive one on biomass. For reasons explained above, these findings contradict existing empirical evidence that show a positive impact of REC and ETS on renewable energy investment, particularly in the wind sector.

The next part (see also Online Appendix 8.11), repeats the previous analysis, but aggregates the data from OECD and non-OECD countries (Online Appendix 8.2 and 8.10). As expected, feed-in-tariffs (FIT) are significantly present in both groups, but have a greater influence in OECD countries, where renewable portfolio standards (RPS) and carbon tax (CT) policies also have a strong positive effect on attracting renewable GFDI, with a more than a 100% rise when the policy is implemented. Public investments (PUBLIC), in contrast, are a negative influence on investment in renewables.

In the case of non-OECD countries, carbon taxes (CT) have no impact on attracting GFDI while emissions trading schemes (ETS) appear to be an important policy instrument indicating a statistically significant, positive effect on renewables investment. The results of the non-OECD countries are clearly particularly important for African countries, as these findings shed light on policies that are likely to be effective in the region today. On the other hand, the results in Table 8.1 show that policies that proved effective in OECD countries (Online Appendix 8.10) might also interest African countries seeking to attract GFDI for developing renewable energy practices.

The performance of African countries in terms of renewable energy investment is much weaker than other countries of the world, pointing at the likelihood that African nations can learn from the experiences of non-African countries. In addition,

green growth of the energy sector not only provides clean energy but also generates employment. Therefore, it is recommended that African countries should consider the above-mentioned policies, such as feed-in-tariffs, carbon taxes, renewable portfolio standards and emissions trading schemes, so as to attract FDI in the renewable energy sector and achieve green growth and employment (Wall, R., Grafakos, S., Gianoli, A., & Stavropoulos, S. (2018). *Which policy*

The performance of African countries in terms of renewable energy investment is much weaker than other countries of the world, pointing at the likelihood that African nations can learn from the experiences of non-African countries

instruments attract foreign direct investments in renewable energy? Climate Policy, 1-14). Realizing both the need to and advantages of moving towards more renewable energy generation, African leaders launched the Africa Renewable Energy Initiative in 2015 with a view to promoting the continent's potential for generating renewable energy. It aims to install 10 gigawatts of new and additional capacity by 2020 and increase this to 300 gigawatts by 2030 (African Development Bank Group, 2017; UNECA, 2016).

Although the commensurate infrastructure to produce and distribute such renewable energy is limited when compared to carbon-based energy, it has the advantage of decentralized production and off-grid access that supports greater social inclusion and security in supply. This could also benefit remote localities currently not served by the grid.

The renewable energy sector also generates higher employment compared to the traditional energy sector. Most importantly, investment in green renewable energy infrastructure ensures a reduction in resource dependency and enables greater climate change resilience (UNECA, 2016). To achieve the goal of such structural transformation in Africa, however, requires a significant advancement in technology and institutional capacities particularly in the urban informal sector because a large proportion of the working population is based there.

Part B | Chapter 9

Smart Cities Within World City Networks

By Ronald Wall and Spiros Stavropoulos

Definitions of a smart city must reflect the urgent need for cities to understand their changing position within a highly globalized economic system
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Among cities that are classified as smart within Africa, Johannesburg leads in terms of FDI

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The smart city is a multidimensional concept with no universal definition. Efforts and policies to develop smart cities in countries around the world to achieve sustainable growth and higher efficiency are increasing. At the same time, cities around the world compete to attract higher volumes of FDI, which requires specific urban characteristics to enable these cities to become more competitive and resilient. In these developmental pursuits, Africa's involvement and performance in smart city innovation and FDI competitiveness remains modest. This study analyses how the smart city concept can become more integrated in urban Africa's economic and social development.

A multitude of definitions of smart city exist, but none is universally acknowledged. They include intelligent city, knowledge city, ubiquitous city, sustainable city and digital city, among others (Cocchia, 2014). In terms of content, strong differences exist in the importance of the role of technology in linking people and institutions

(Belissent and Giron, 2013; IBM, 2013; Nam and Pardo, 2011; Coe et al., 2000); the importance of human capital in bridging the gap between education and productivity (Florida and Mellander, 2012; Storper and Scott, 2009; Shapiro, 2005); or the need for greater environmental considerations in city planning (Fitzgerald, 2010). Information technology is an essential and shared component in the various interpretations of the smart city concept (UN-Habitat). Most definitions are based on standard indicators, such as education levels, creative class, mobility, ICT and environmental quality (Caragliu et al., 2011) and do not specifically differ from previous conceptions of urban progress such as sustainable cities, for instance. All these definitions, however, seem unable to accommodate the contemporary urgency for cities to understand their changing position within a highly globalized economic system. That is one of the major reasons why a unique, universal academic smart city definition does not yet exist (Hemment and Townsend, 2013).

Figure 9.1. GIS map of total FDI flows between 126 smart cities (2005-2013)



Source: Wall and Stavropoulos, 2017, based on fDi Markets data

In this study, we aim to contribute towards a clearer definition, by postulating a crossover between smart city literature and World City Network literature. A tentative bridge can be found when treating smart cities as multilayered territorial systems that seek to maximize problem solving capacities (Komninos, 2002; Komninos, 2006). Whereas smart city literature generally views that social, economic, technological, political and environmental characteristics make a city smarter than others (Caragliu et al., 2011), the World City Network literature stresses that the success of a city is increasingly conditional on its relative position within the worldwide networks that connect cities and their economies through multiple globalized flows comprising the movement of capital, people, knowledge, information and ideas (Sassen, 1991; Knox and Taylor, 1995; Alderson and Beckfield, 2004; Coe et al., 2004; Derudder et al., 2010; Wall and v.d. Knaap, 2011).

Global FDI is one of the key worldwide networks in which cities can competitively excel (Grimwade, 2000; Rugman and Verbeke, 2005). The higher a city's relative position in FDI attraction, the more stable its economy, and the more likely investors will continue to invest there in future (Wall and Burger, 2013; Wall et al., 2014). In network studies, this characteristic is

known as 'preferential attachment' (Barabási, 2003; Boschma and Ter Wal, 2009) and can be derived from network centrality measures (as explained below). Nonetheless, besides network measures, urban

Global FDI is one of the key worldwide networks in which cities can competitively excel. The higher a city's relative position in FDI attraction, the more stable its economy, and the more likely investors will continue to invest there in future

'smartness' will also be conditional on territorial characteristics, e.g. social, economic, technological, political and environmental location factors (Kitson et al., 2004; Wall and Burger, 2013).

Smart city investments are cheaper and easier to run in the medium term because there is a single control system to manage such urban characteristics as transportation, water and energy grids (more coordinated and flexible systems). This improves efficiency, transparency, and public safety; reduces

congestion and pollution; and enhances traffic management and routing. Major ICT companies are investing heavily in technologies that allow city managers to address their urban challenges in new ways. Therefore, being part of worldwide networks is an opportunity not to be missed (Anderton and Akinola, 2011).

For cities, and particularly for African cities, economic sustainability is a central issue because many cities lack appropriate urban and socio-economic planning strategies while their populations are booming. Economic sustainability is a major pillar of smart city development and besides improving

Economic sustainability is a major pillar of smart city development and besides improving the local economic context, needs to be seriously addressed to promote the attraction of investment and business

the local economic context, needs to be seriously addressed to promote the attraction of investment and business (International Electrotechnical Commission, 2014). Hence, in this chapter we argue that besides locational factors, the regional and global positioning of cities (network characteristics) within worldwide FDI networks is also imperative to the smartness of cities.

Data and methodology

Annual data on city characteristics derived from the Euromonitor Passport database and greenfield investments-based data from the Financial Times fDi Markets database have been used. The sample consists of FDI between 126 global “smart” cities, covering the period 2005-2013 (see Map 9.1) grouped into four categories: Very Smart, Smart, Moderately Smart, and Less Smart in line with the ranking procedure of the Centre for Globalization and Strategy (IESE). These cities are categorized by order of smartness, from 1 (low) to 4 (high). Network measures applied in the analysis are ‘indegree’, which represents the relative number of inward investments received by each of the 126 cities (often termed ‘prestige’) and ‘outdegree’ (normalized) which concerns the relative number of outward investments emanating from these 126 cities

to other cities, expressing the ‘power’ that cities wield over others. ‘Betweenness’ is also used. This is a more complex network measure, reflecting the strategic position or ‘brokerage’ that a city holds within the entire system of cities (Alderson and Beckfield, 2004). Lastly, ‘Inward Distance’ has been applied. This is a measure of the aggregate geographic distance of investments between these 126 smart cities reflecting the international scope of each city. Cities’ territorial (local) characteristics included in the analysis are GDP, strength of legal rights, the Gini Coefficient, openness of the city, land area, population size and unemployment rate (see also Online Appendix 10.1).

Findings

Table 9.1 presents the outcome of the overall model and the influence of each of the four smartness categories. Looking at the network indicators, the results suggest that the higher a city’s relative ability to attract FDI from many different city sources (indegree), the higher its smartness level. Likewise, cities with a wider geographic scope (inward distance) will be smarter. As shown in Part A of this report (section 3.5 and Figure 3.7) the greater a city’s average distance to sources of FDI, the better it will perform in the attraction of investment. This is clearly reflected in Map 9.1 by the large number of smart cities located in the more advanced economies that attract large volumes of FDI from the farthest reaches of the globe. Cities in developing economies, typically have both far less inward investment (indegree) and a much lower geographic expanse (inward distance). The analysis includes seven African smart cities: Cairo, Cape Town, Casablanca, Johannesburg, Lagos and Nairobi. These African cities score comparatively low in terms of smartness (the categories Less Smart and Moderately Smart) and also attract a much smaller volume of FDI than many other smart cities worldwide. Amongst these African smart cities, Johannesburg leads in terms of FDI.

Unexpectedly, a city’s strategic position within the system (betweenness) does not appear to lead to higher levels of smartness. This may be sector specific or due to inherent smartness categorization bias. Turning to the impacts of city characteristics on smartness, we find that GDP (i.e. market size), strength of legal rights (i.e. degree of democracy) and openness (level of internationalization) are all positively associated with smartness. By contrast, negatively significant

Table 9.1.
City smartness, network and location characteristics

Variables	Overall	Less Smart	Moderately Smart	Smart	Very Smart
Betweenness (global strategic position)	---	+++	+++	---	---
Inward distance (geographic expanse)	+++	---	--	+++	++
Outdegree (investment power)	---	+++	+++	---	---
Indegree (investment prestige)	+++	---	---	+++	+++
Population (citizen count)	---	+++	+++	---	---
GDP (market size)	+++	---	---	+++	+++
Strength of legal rights (democracy level)	+++	---	---	+++	+++
Gini Coefficient (level of inequality)	---	+++	+++	---	---
Openness (level of internationalization)	+++	---	---	+++	+++
Area (km ²) (urban size)	0-	0+	0+	0-	0-
Unemployment rate (economic status)	---	+++	++	---	---

Source: R. S. Walla, and S. Stavropoulos, 2018 based on fDi Markets and Euromonitor Passport data

+++ Very significant and positive relation ++ More significant and positive relation + Significant and positive relation --- Very significant and negative relation
 -- More significant and negative relation - Significant and negative relation 0+ Not significant but positive relation 0- Not significant but negative relation



Emerging globally connected cities like Lagos should focus on widening their continental and worldwide investor base through regional institutions such as ECOWAS

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relationships emerged for other indicators: the Gini Index (degree of inequality), unemployment level (economic condition), population (citizen count) and area (urban territory size). These statistical characteristics explain to a large extent African cities' modest smartness. African cities are characterized by various combinations of rapidly growing populations, high levels of income inequality and high to very high unemployment levels (especially among youths and in weaker urban economies with large informal sectors). The results for the different smartness groups in columns 2 to 5 support the view that the responsiveness of city smartness to network and city characteristics differs between the four groups. The signs of coefficients for the first two low smartness groups are both similar and the opposite of those for cities in the two high smartness groups.

Conclusions

This study first and foremost aimed at introducing a more contemporary methodology for future smart city analyses by merging the methods used in World City Network literature with those of smart city studies (Wall, R. S., and Stavropoulos, S. (2016). *Smart cities within world city networks*. Applied Economics Letters, 23(12), 875-879). The results show that besides regular territorial features, network characteristics also play an important role in city smartness. This challenges the mainstream, over-territorialized approach to smart city research, by introducing

Learning from foreign technology and investment promotion agencies to design more diverse, expansive and efficient FDI-attracting conditions is essential for African cities

the importance of understanding cities as network components in a worldwide urban system in which transnational network embedding exists. Based on this, it can be concluded that municipalities complement their understanding of how to improve 'endogenous' smart city urban characteristics with an 'exogenous' understanding of the relative importance of their cities within the global economic system. In a



Medium-sized cities like Durban would benefit most from first improving their national and regional investment base



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sense, this concerns matchmaking the development of a city with systemic changes in the world city network. In other words, city managers, notably those in developing economies, should come to better understand the importance of improving their locality-specific urban features to better match the demands of the global economic system, if they seek to enhance the degree of smartness.

Learning from foreign technology and investment promotion agencies to design more diverse, expansive and efficient FDI-attracting conditions is essential for African cities. It will not help to merely address one of the major challenges like, for instance, how to promote sustainable urbanization. Cities should simultaneously attempt to significantly improve their position in the world city network. African cities can learn from cities in the more advanced economies on how to develop smart city characteristics. For instance, Africa has huge potential for developing its renewable energy sector, assisted by renewable energy FDI. The smart technologies FDI can bring, can play an important role in, among others, achieving more sustainable growth and generating employment.

Lastly, based on the econometric results, it can be concluded that smart cities are cities that: a) have a good track record in attracting FDI from geographically distant and diverse sources; b) are socially and economically open to the world; c) have high economic production and employment levels; d) foster strong equality amongst citizens; and e) have relatively small populations and geographic sizes.

These will be challenges for African local authorities, national governments, regional alliances and the African continent as a whole. It will require policies and strategies that enable destination cities to attract FDI from as many source cities as possible (diversity), and from the farthest reaches of the globe (reach). This requires municipalities to develop the stringent internationalization marketing strategies demanded by global investors, through investment promotion agencies (IPAs), smart procurement agencies (SPAs) and competition commissions. The aim should be to increase cities' global and regional portfolio of foreign investors.

Emerging globally connected cities like Cairo, Johannesburg, Lagos and Nairobi should focus on further African, continental and worldwide expanse through their regional institutions like SADC and ECOWAS. Medium-sized cities like Durban and Mombasa would benefit most from first improving their national and regional investment base.

Part B | Chapter 10

The Effect of Green Competitiveness on FDI

By Ronald Wall, Dorcas Nyamai
and Meera Malegaonkar





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Countries like Tunisia with a high Environmental Performance Index attract higher values of FDI

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To address the twin challenges posed by global economic integration and global climate change, cities and countries must be both economically competitive and environmentally sustainable. However, theories about the coexistence of these goals have been in conflict. This study therefore aims to contribute to the debate by proposing the concept of ‘green-competitiveness’ (GC) which consolidates the World Economic Forum’s Global Competitiveness Index (GCI) and Yale University’s Environmental Performance Index (EPI). To this end, the study tests the effect of three indicators on: a) the attraction of FDI into

countries worldwide; and b) the attraction of FDI into African countries by comparing the results and eliciting policy recommendations for Africa.

Traditionally, the objectives of development have been the satisfaction of basic needs and maintenance of good standards of living and welfare. But the impacts of development on the environment were mostly not well considered, if at all. Consequently, environmental deterioration and climate change have forced the world to acknowledge the need for more environmentally sustainable and equitable development paths. In today’s global economy, the

path to economic progress for firms, cities and nations is even more dictated by competitiveness than before, since trade liberalization has promoted the economic integration of cities and firms worldwide. While economic competitiveness and environmental progress are now accepted global concepts of development, their meaning varies for different geographic areas e.g. Europe, Asia or Africa. The main concern of the world's developing economies is poverty reduction through economic growth and consequently the environmental aspects of development are often of a lesser concern. In contrast, for advanced economies, excess wealth that is actually at the basis of climate change has enabled these countries to pay greater attention to environmental and climatic issues. However, because 90% of the world's future population and economic growth will be in developing economies, the importance of environmental issues cannot be ignored by either the advanced or developing areas of the world.

To address the twin challenges of economic growth and climate change, firms, cities and countries need to simultaneously focus on often-conflicting growth and sustainability goals. Climate policies are said to cost money and lead to the argument of many countries to "grow first, clean up later" (Hallegatte et al., 2012; Dasgupta et al., 2006). Theories from the field of environmental economics, emphasize the damaging effect of human development on ecosystems and claim that the propensity of a destination to become a 'pollution haven' attracts FDI (Wheeler, 2001; Dasgupta et al., 2002; Meadows et al., 1972). Conversely, sustainable development approaches advocate the concept of competitive sustainable development based on well-designed environmental policies that will not negatively affect ecosystems (Porter and Van Der Linde, 1995).

In the 21st century, different parts of the world are still in various stages of development and competition (Rostow, 1956; Narula and Dunning, 2000). The more advanced economies have already undergone their process of industrialization and wealth accumulation, which have led to today's polluted, crowded and car-dependent cities. The more recent shift of such cities to inherently less polluting service-oriented economies has directed their attention to more sustainable environments (Glaeser, 2011). Instead of emulating the unsustainable development pattern once followed by today's advanced economies, developing nations could leapfrog to an age of green-competitiveness without

first fully passing through the environmentally unfriendly interim phases.

The New Urban Agenda includes the goal of environmentally sustainable and resilient urban development (United Nations, 2017). This will require countries to be highly competitive in attracting domestic investment and FDI while ensuring that such investment not only facilitates employment creation and social equality but will also ensure a less-destructive impact on the environment.

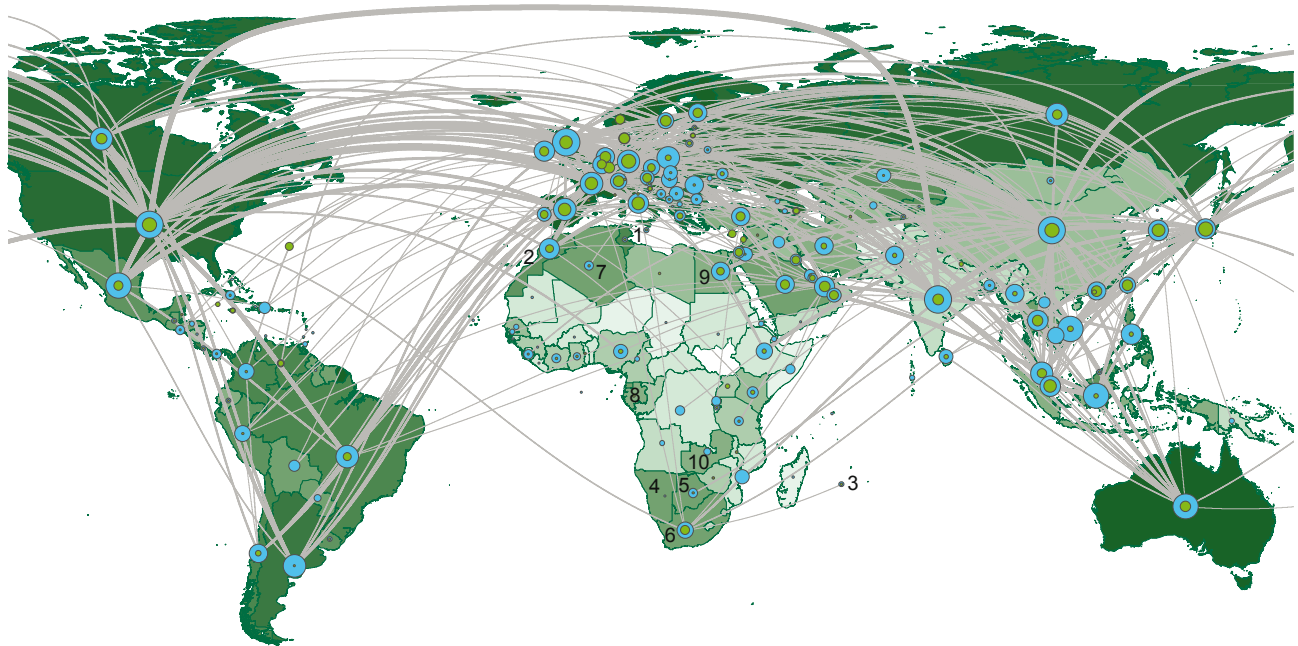
In this context, the key environmental data for our study concerns EPI, a metric that ranks countries by their performance in the protection of human health and ecosystems. These categories are based on the variables health, air quality, water and sanitation, water resources, agriculture, forestry, fisheries, biodiversity, and climate and energy. Associated

The UK, Singapore and almost all European countries receive large amounts of FDI, despite their smaller territory and population sizes

with these variables, are more than 20 indicators. The other important measure used in this study is the GCI, which quantifies the impact of a number of factors that contribute to creating conditions for country-level competitiveness, with a specific focus on the macroeconomic environment, the quality of institutions, and the state of technology and supporting infrastructure.

The current study tests how the concept of green competitiveness (GC), relates to the attraction of FDI at both the global and Africa scales, as well as establishing whether differences exist. Using statistical techniques, an overall index of green competitiveness was calculated out of the World Economic Forum's (WEF) Global Competitiveness Index (GCI), the Environmental Performance Index (EPI) developed by Yale University (Yale Center for Environmental Law and Policy) and Columbia University (Center for International Earth Science Information Network) in collaboration with the WEF and the Joint Research Centre of the European Commission. The analysis is carried out in three stages. The first investigates whether GC, on its own, has a significant relationship with FDI attraction. The

Map 10.1. Environmental Performance Index (EPI) and greenfield FDI flows between countries (2006-2014)



Blue nodes: total inward FDI Green nodes: total outward FDI Dark green areas: highest Environmental Performance Index
Source: Wall, 2017, based on fDi Markets, Yale University, Columbia University, World Economic Forum and the European Commission

second stage tests the influence of sub-components of the GCI and EPI on FDI attraction, while the third stage explores in more detail the effects of the EPI sub-indicators on FDI. Population has been included in all models to control for country size.

FDI and green competitiveness in Africa

From a global perspective, the top destinations for total FDI are the US, followed by China, the UK, Canada, Russia, Belgium, Brazil, Singapore and Australia which reflects the general importance of a country's physical and population size. However, the UK, Singapore and almost all European countries receive large amounts of FDI, despite their smaller territory and population sizes. Furthermore, large amounts of FDI also flow into emerging economies, especially in Asia and Latin America. Although Africa is not a top recipient of FDI in terms of volume, it does form one of the regions with the highest growth in investment (for number of investments as well as value of investments). Africa has a strong variation of investment across its regions and countries. At the regional level, Northern Africa receives the

From a global perspective, the top destinations for total FDI are the US, followed by China, the UK, Canada, Russia, Belgium, Brazil, Singapore and Australia which reflects the general importance of a country's physical and population size

highest values of FDI, followed by Western and Southern Africa. Central and Eastern Africa receive relatively small values of investment (see also Online Appendix 9.6). Several African countries, particularly in the north, such as Algeria, Egypt and Libya, alongside Angola, Nigeria and South Africa, are clearly well integrated into the world FDI network (Map 10.1). There is little variation concerning the GC, GCI and EPI indexes across African regions, with Northern and Southern African moderately more competitive (see Online Appendix 9.8).

The findings for EPI show that Northern Africa does better than the other African regions in terms of

environmental performance (environmental protection and human health) followed by Southern and Central Africa. Eastern and Western Africa lag in environmental protection and human health, although these two regions have shown relatively larger improvement in their performance between 2006 and 2016.

There are also clear and distinct country-level variations in EPI, as shown by Map 10.1. Africa appears to lag behind other continents in terms of environmental protection and human health, arguably because of the lack of appropriate governance and policies (Hsu, 2016). There is further clear variation across African countries with Northern and Southern African countries performing better than others in Africa. For instance, Tunisia scores highest in terms of EPI followed in descending order by Morocco, Mauritius, Namibia, Botswana, South Africa, Algeria, Gabon, Egypt and Zambia. These countries not only have high EPIs but also attract higher values of FDI. This indicates that economies prioritizing environment and human health tend to attract more investment.

Findings

Global analysis (see Online Appendix 9.9) reveals that GC has a positive and significant effect on attracting foreign investment when controlled for population size. It implies that the more a country develops towards “greenness” the more likely it will be able to attract FDI. This is confirmed by Northern European countries where greener policies have helped attract more FDI when compared to other countries. Population size also positively contributes to increases in FDI - the higher the population, the higher the FDI. Some authors suggest that countries and their population size are determinants of FDI because these aspects reflect market-size and production factors, which are of interest to investors (Checchi and Faini, 2007; Yu and Walsh, 2010).

The Africa specific analysis in Table 10.1 and Figure 10.1 also shows that GC has a significant and positive effect on attracting FDI to Africa. Hence, the more African countries improve their green competitiveness, the more FDI they can expectedly attract. This finding serves to emphasize that environmental sustainability can go hand-in-hand with economic competitiveness. Again, population levels in Africa have a positive and significant effect on FDI, as explained above.

Table 10.1.
FDI and green competitiveness at the scale of Africa (2016)

Variables	Model 1 Greenfield FDI	Model 2 Greenfield FDI	Model 3 Greenfield FDI	Model 4 Greenfield FDI
Green competitiveness (GC)	++			
Global Competitiveness Index (GCI)		++		
Environmental Performance Index (EPI)			+++	
Access to sanitation				+++
Carbon intensity				-
Population	+++	+++	+++	++

Source: Wall and Nyamai, 2017, based on fDi Markets, World Economic Forum and Yale University data

+++ Very significant and positive relation
 ++ More significant and positive relation
 + Significant and positive relation
 --- Very significant and negative relation
 -- More significant and negative relation
 - Significant and negative relation
 0+ Not significant but positive relation
 0- Not significant but negative relation

At the country level, Mauritius, Morocco, Tunisia, South Africa and Botswana were found to be the top-five African countries in terms of GC and are also amongst the top recipients of greenfield FDI (see Figure 10.1). This scatter-plot also shows a strong positive relationship between African GC and FDI (see also Online Appendix 9.2). In Models 2 (column 3) and 3 (column 4), we see similar and even stronger results to the global scale (Online Appendix 9.9), i.e. that EPI and GCI are both positively significant to FDI attraction in Africa (Table 10.1). For EPI this means when controlled for population, that it still holds importance in attracting FDI. This implies that environmental factors also play a role in determining an African country's investment attractiveness. In other words, the more an African country improves this quality, the more it will raise its FDI levels.

Similarly, GCI shows a very significant and positive influence on attracting FDI at the global level (see Online Appendix 9.9). This finding is in line with the study in this report on Knowledge FDI which also found that the higher the competitiveness of a country, the more attractive it is for FDI (Wall et al., 2018). The majority of African countries improved their global competitiveness from 2011 to 2016 and a number of them rank higher than such popular FDI destinations as Cambodia, Indonesia and Myanmar (African Development Bank Group, 2017). For Africa, this



Because Africa is in the early stages of industrialization, it can achieve growth with alternative energy sources while preserving the environment



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outcome is less significant (see Table 10.1) showing that it has not reached the competitiveness level of most other countries in the world. Our results show that countries which have stronger “greenness” and “competitiveness” policies, and which are also endowed with better GC characteristics, will in turn attract more FDI.

The final part of this analysis tests the sub-indicators of EPI on FDI globally (Online Appendix 9.9) and for Africa (Table 10.1). Both revealed similar results albeit that worldwide this final model explains 50% of the variance of FDI attraction, whereas in Africa it explains 65%. Online Appendix 9.9 shows that access to sanitation has a positive significant effect on FDI and is equally important at both the global and African scales. Other studies also found that sanitation is an important factor for attracting FDI in African countries (Van Gils et al., 2018). In Africa (see Table 10.1), the availability of basic services is an important factor in determining FDI attraction into countries. This is probably better explained as: “the more a country has access to sanitation, the more developed it is which, in turn, is attractive to investors”.

Carbon intensity (i.e. CO₂ emissions) have a highly significant and negative impact on investment (see Model 4). This can be interpreted as: “the cleaner a country, the more liveable and, consequently, the more favourable to attracting investors”. This probably relates more to knowledge-intensive than manufacturing investments because knowledge-based industries tend to locate in cities with a better quality of life. Again, this indicator possibly serves more as a proxy for countries’ development levels. It means that countries should increase productivity in a sustainable way, without damage to the environment. Carbon intensity concerns both the ability to control carbon emissions and the degree of a country’s transition to alternative forms of energy. Benin, Sudan and Togo, for instance, have much higher levels of carbon intensity when compared to other countries, while receiving small amounts of FDI. They are in descending order Algeria, Tanzania, Angola, Niger and Zimbabwe in terms of carbon intensity, that all receive higher shares of FDI (see Online Appendix 9.5). This indicates the nature of the FDI received by these countries (with higher carbon intensity), which is likely in the extractive and heavy industries that are mostly not too friendly in terms of the environment or air pollution.

Conclusions

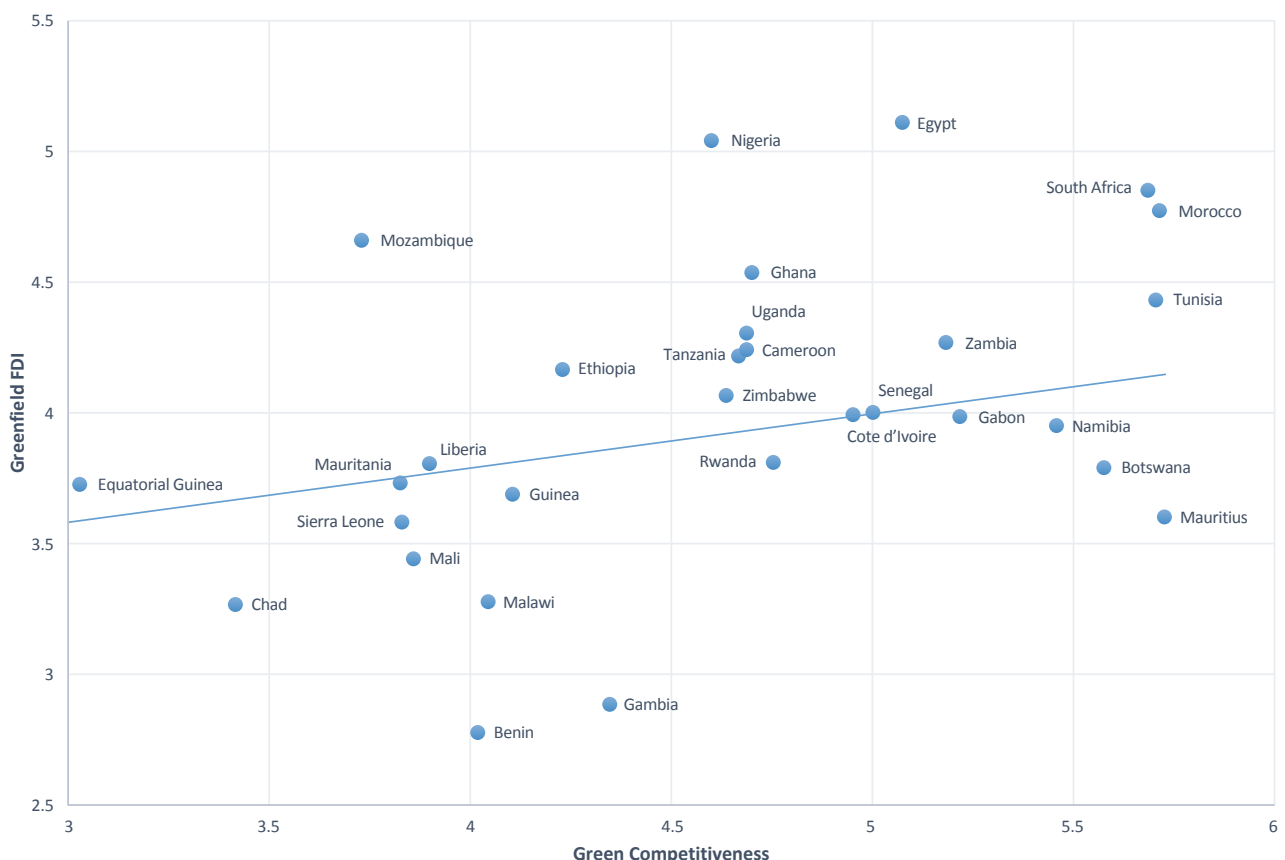
This study concludes that the impact of green competitiveness on attracting FDI is significant for countries across the world, in general, and for Africa in particular. Because Africa is still in the initial stages of industrialization, the continent can take this as an opportunity to industrialize and achieve higher growth with alternative energy sources while preserving its natural resources and environment. Similarly, at deeper levels it was found that both EPI and GCI importantly affect FDI attraction both across countries of the world and within Africa. This implies that the GCI index can be complemented with the EPI index and that they better explain investment attraction together rather than separately.

The results show that countries with stringent policies regarding environmental progress and economic competitiveness are more likely to secure foreign investment and are therefore more

integrated within the global economy. The deeper analysis based on EPI sub-indicators shows that at the global level, countries' access to sanitation strongly influences the attraction of investment. In other words, countries lacking basic amenities are less attractive to foreign investors. Another important negative factor for FDI attraction is CO₂ emissions because cleaner air is associated with liveable environments in the more advanced economies. These findings equally apply to the world and Africa. It reinforces the notion that in terms of investment attractiveness, Africa should adopt the same economic principles as the rest of the world.

This study further shows that Africa can achieve industrialization while protecting its environment. Efficient policies will be critical to achieving the three major objectives of sustainable growth, poverty reduction and mitigating climate change. Finance technology and renewable energy are the

Figure 10.1. FDI versus green competitiveness in Africa (2016)



Source: Wall and Nyamai, 2017, based on fDi Markets, World Economic Forum and Yale University data



In terms of FDI, it is urgent that African countries improve their environmental conditions

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two important sectors which provide opportunities for such green industrialization in Africa. Due to the late start of its industrialization process, Africa can leapfrog the highly polluting industrialization phases experienced by other major regions and adopt alternative strategies for green industrialization. These can yield sustained, sustainable and inclusive growth and employment generation without damaging the environment. National governments, through policy guidance, are the key players in achieving such green industrialization assuring the most efficient use of energy and resources. See also the chapter on how environmental policies attract renewable energy FDI.

Recommendations

Because 65% of the attraction of FDI to Africa is explained by green competitiveness (GC), African countries should adopt GC frameworks in their planning to evaluate, compare and improve their performance in all parameters of green competitiveness. Although the overall green

competitiveness score is significant, its importance varies across sectors and locations. Places seeking FDI in services should focus on improving their greenness and environmental qualities. It is therefore urgent that African countries improve their environmental conditions and public health. Many countries have high air-pollution levels and lack safe drinking water, which is a major threat to public health (Hsu, 2016). The manufacturing and hi-tech sectors, which generally generate higher employment, need environmental regulations that limit the environmental parameters to benchmark levels. Appropriate regulations will not only protect the environment but also increase a location's attractiveness for investment and stimulate innovation in green technologies, products and services.

Since population and the quality of human resources are also significant factors determining FDI attraction, countries should invest in education and skills-generating programmes. This will not only improve the quality of FDI coming into these countries but will also strengthen the local economy and, in turn, attract more domestic investment and FDI.

Part C | City case studies

Johannesburg: Interlinked Narratives and Investment by Foreign Firms

By Umakrishnan Kollamparambil
and Rubina Jogee







Pretoria leads Johannesburg in terms of high-tech FDI for cities in the Johannesburg-Maputo corridor

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The aim of the present study is to document the interdependence between Johannesburg and foreign-owned companies over time with a view to understanding the present-day context of foreign companies' presence and impact on the city. The study methodology has been multipronged, relying on existing data and literature but is predominantly based upon open-ended interviews with stakeholders viz. CEOs of foreign firms, policymakers as well as local firms that are either suppliers to or competing with foreign firms. The remainder of this study is divided into three broad segments. The first explores the role of foreign firms in the creation of modern day Johannesburg, providing historic background and context to the study. The second segment constitutes the core of the research with findings on the current relationships between Johannesburg and its foreign firms, while the third and final segment reviews the policy implications for the future.

Globally, South Africa is ranked 74 among 190 economies in terms of ease of setting up new business according to the latest World Bank annual ratings. In 2017, the city moved up two places in the 2016/17 Global Competitiveness Index to rank 47th among 138 countries covered by this Index.

Johannesburg, fondly nicknamed “Jozi” by South Africans, is the most populous city in South Africa. It has an estimated area of 335 km², while the City of Johannesburg Metropolitan Municipality (CJMM) is estimated at 1,645 km², covering surrounding areas like Sandton, Midrand and Soweto. (Dept. of Local Government, 2017). Johannesburg is the provincial capital of Gauteng, the smallest but wealthiest province in South Africa. Gauteng accounts for only 1.5% of South Africa’s land area but is its most urbanized province with over 24% of the national population and it generated 35% of the country’s GDP in 2016 (StatsSA, 2016). As shown in this study, Johannesburg and its surrounding area constitute a financial hub for the entire African continent and are home to affiliates of multinationals from all parts of the world (Wall, 2017: 8).

Intertwined history of Johannesburg and foreign firms

Johannesburg is a young city, also known as *Egoli* - the city of gold - as its establishment and rise are linked to the discovery of gold on the Witwatersrand in 1886. A rapid growth of the Johannesburg population (then known as Witwatersrand in Transvaal) ensued

due, initially, to the migration of Europeans from the British Cape Colony and Europe, particularly from Britain (Robertson, 1958). The mining operations also led to large-scale increases in the multi-racial, mostly black, population brought in from outside Transvaal and later from China to provide manual labour in the mines. The larger companies like Consolidated Goldfields and Rand Mines were established to exploit the mineral wealth and were foreign-incorporated and listed on the London Stock Exchange. While the large mines were predominantly financed by British capitalists, the technology and know-how came from the USA, notably Nevada, where deep-level mining technology had been developed (Nkosi, 1987). American capital soon followed through the formation of the Anglo-American Corporation in 1917. Since then, foreign firms have continued to play an important role in the city's economy.

Johannesburg developed as a city for most of the 20th century within a context of institutionalised racism known as apartheid, with areas reserved for whites serviced with all amenities, while those for black, Indian and coloured people were neglected, overcrowded and with few opportunities for education or employment. The foreign firms in Johannesburg reinforced the apartheid system with ownership and all positions of responsibility held by white males. These foreign firms benefited from the apartheid laws that enabled white-owned companies to control the non-white workers, keep their wages low and reap immense profits. This resulted in the city and the country developing as one of the most unequal in the world.

Although the 1960s saw initial calls for disinvestment and economic sanctions against South Africa, they did not meet with much success as most of the Western countries that predominantly owned the foreign firms in South Africa did not support the call. The apartheid government and economy finally fell to international pressure with the call for divestment gaining momentum in the 1980s and US federal legislation in 1986. With South Africa's most important trading partners like the USA, the EC, and Japan imposing economic sanctions, many of the foreign firms found it no longer possible to carry on with 'business as usual'. Consequently, South Africa experienced considerable capital flight from 1984 onwards because of the disinvestment campaign and the repayment of foreign loans (Knight, 1990).

By the dawn of democracy in 1994, Johannesburg had firmly established itself as the economic hub of the Republic of South Africa, having evolved from a mining-based economy to become a financial and services hub for the African continent. While the new democratic government had the onerous task of reviving the confidence of foreign investors, it also had to finely balance socio-economic transformation in the interest of a population majority disadvantaged through inferior education, low wages and unequal social and economic opportunities under the apartheid dispensation. It needed to not just transform the foreign firms in the interest of social equity, but also to use them for disseminating progressive social change in society. This still constitutes the present-day challenge for policy making.

By the dawn of democracy in 1994, Johannesburg had firmly established itself as the economic hub of the Republic of South Africa, having evolved from a mining-based economy to become a financial and services hub for the African continent

Profile of modern day Johannesburg

The Greater Johannesburg Metropolitan Area had an estimated population of 9.8 million in 2017 (World Population Review, 2017). The 2011 Census showed that the City of Johannesburg had a population of 4.4 million (StatSA, 2011). The provincial government of Gauteng has, over the years, spent substantially (accounting for 10% of provincial budget) on developing the infrastructure in the city to attract and create a more conducive environment for domestic and foreign investment. This was further spurred by the province's infrastructure development as part of the country's hosting of the 2010 FIFA Soccer World Cup. A majority of the projects under this initiative were located in Johannesburg. An example of the province's projects includes 'Blue IQ', a multi-billion Rand initiative to invest in economic infrastructure development. Other projects include the Gauteng Freeway Improvement Project, which involves upgrading existing roads and building new roads to

Table 1.
Ease of doing business in Johannesburg compared

Starting A Business	Johannesburg	SSA	OECD
Number of procedures	6	7.8	4.8
Time (days)	46	27.3	8.3
Cost (% of warehouse value)	0.3	54	3.1
Construction Registration			
Number of procedures	19	14.5	12.1
Time (days)	141	155.6	152.1
Cost (% of warehouse value)	1.1	7.6	1.6
Accessing Electricity			
Number of procedures	5	5.3	4.8
Time (days)	226	120.4	76.2
Cost (% of warehouse value)	729.5	3872.5	62.5
Registering Property			
Number of procedures	7	6.2	4.7
Time (days)	23	59.7	22.4
Cost (% of warehouse value)	6.3	8	4.2
Enforcing Contracts			
Time (days)	600	655.2	553
Cost (% of warehouse value)	33.2	44.3	21.3

Source: World Bank (2017)

improve accessibility and reduce congestion (National Roads Agency); the Johannesburg city's public-private broadband network project to ensure the city is a digital smart city; and projects by City Power (an independent municipal entity wholly owned by the City of Johannesburg) to ensure sufficient power capability for meeting the city's increased demand.

Johannesburg is the African continent's dominant internet centre and ranks as the 23rd city in the world in terms of telecommunications development. South Africa is now the fourth fastest growing GSM (Global Systems for Mobile Communications) market globally. Johannesburg ranks top among the nine South African cities evaluated by World Bank for the ease of setting up of new business and registering property. However, the city lags in 8th when it comes to

accessing electricity, obtaining construction permits and enforcement of contracts.

Table 1 provides the position of the city relative to the Sub-Saharan African (SSA) region and the OECD in the ease of doing business. Johannesburg compares favourably in terms of costs in relation to the SSA region. However, time delays are high when it comes to starting a business and getting electricity. Apart from this, the lack of a well-functioning integrated public transport system has been identified as a limiting aspect of Johannesburg. To rectify this, the Corridors of Freedom project has been implemented to introduce integrated public transport and develop commercial and residential spaces along these transport corridors. However, the uneven nature of urban development as highlighted by Wall (2017: 14) continues to be a cause of concern.

Johannesburg is second only to Cairo among African cities in attracting FDI (Wall, 2017) and accounted for nearly 25% of the FDI flows into the Johannesburg-Maputo corridor for the period 2003-2014. This compares to the similar FDI domination of Cairo in the Cairo-Alexandria corridor (Mahdil Nakeeb, Barakat, 2017). Figure 1 shows the positive trend of FDI flows into the corridor with total FDI flows more than doubling between 2003 and 2014. FDI flows to Johannesburg, on the other hand, have not followed a similarly positive trend in recent years and the share of the city in the corridor's FDI inflow has fallen from 21% in 2003 to 12% in 2013.

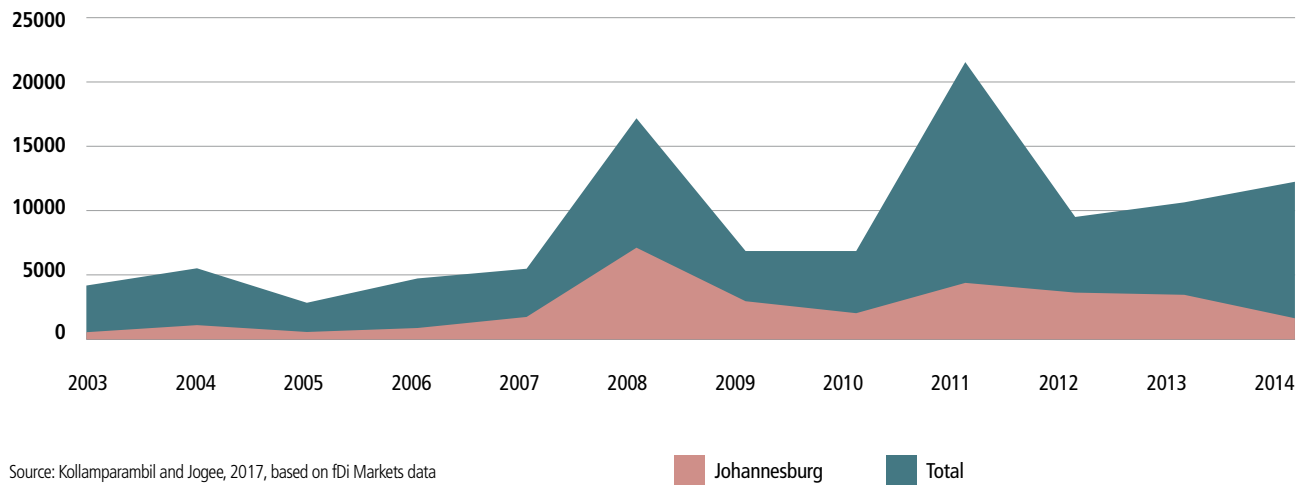
Johannesburg stands apart as the city with not just the highest share of FDI to the corridor, but also in attracting the most diversified FDI. It attracts investment in the manufacturing, services, hi-tech and resource sectors. In terms of hi-tech FDI, Pretoria leads Johannesburg marginally among cities in the corridor (Figure 2).

A further breakdown of sectors (Figure 3) shows that Johannesburg dominated as the destination for FDI in industrial activities such as technical support centres, sales and marketing, ICT, education, logistics and as indicated by Wall (2017: 9), headquarters of multinationals.

Johannesburg attracts FDI in a wide range of sectors (Figure 4). FDI into ICT accounted for 28% of total FDI into Johannesburg in the period 2003-2016 (Figure 6), followed by metals and financial services at 11% and 8% respectively.

The UK is the single-largest source of FDI into Johannesburg, accounting for a quarter of all FDI

Figure 1. FDI flows into the Johannesburg-Maputo Corridor, 2003-2014 (USD millions)



Source: Kollamparambil and Joojee, 2017, based on fDi Markets data

in the period 2003-2015, followed by the USA and Australia, accounting for 18% and 16% respectively (Figure 5). Among other economies, China and India figure as prominent investors in the city.

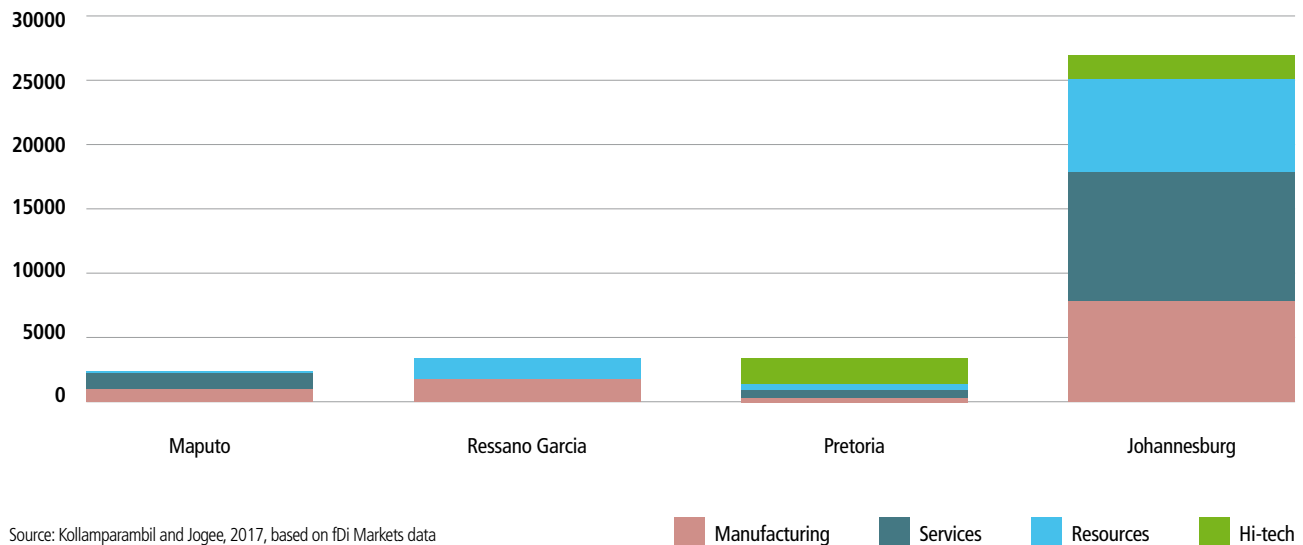
Analysis of FDI concentration by industrial sector shows significant differences between FDI sources (Figure 6). While UK and Chinese investments are highly focused on the metals and minerals sector, USA and Indian FDI is more diversified, although

investments in the coal, software and alternative energy sectors dominate.

Interview findings

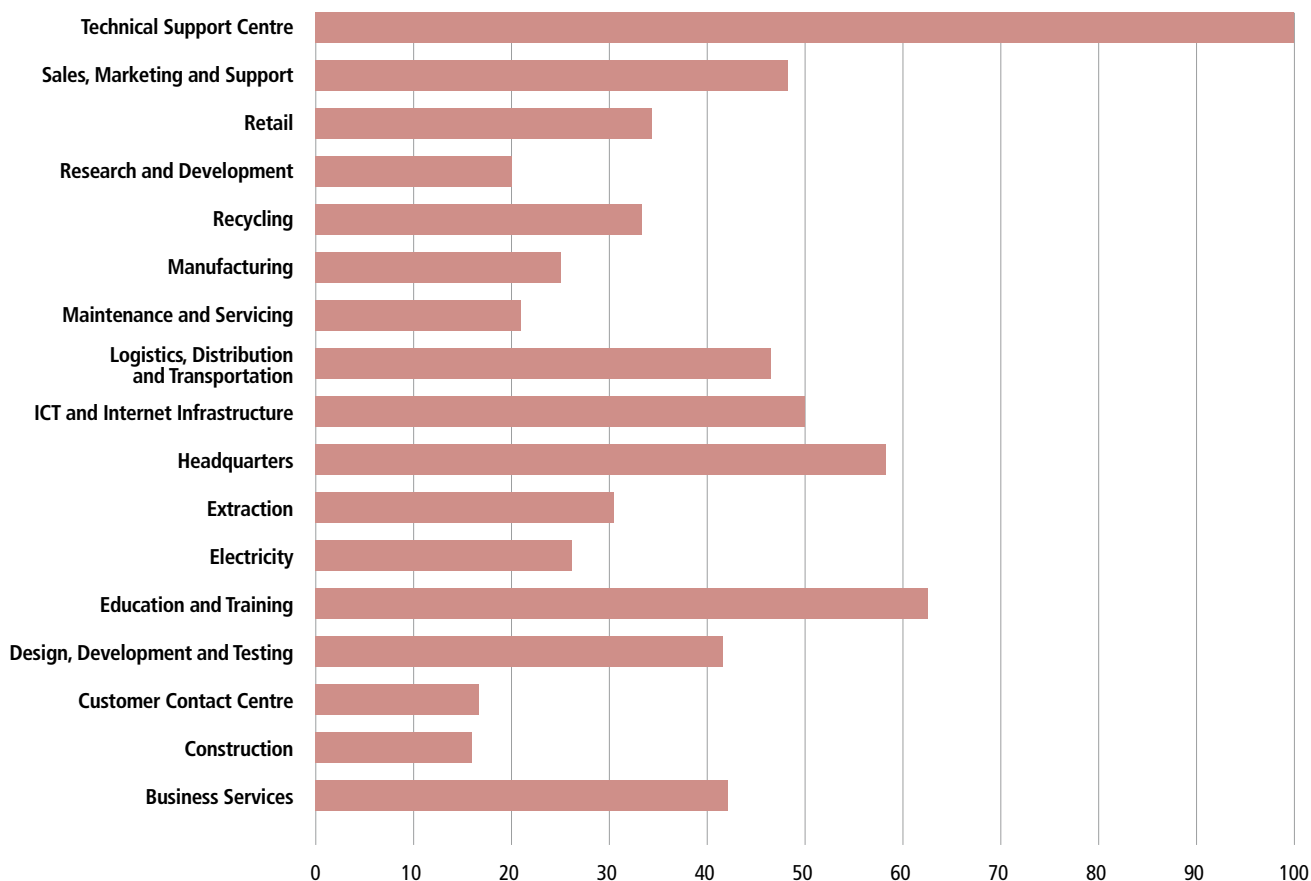
The profile of the foreign firms interviewed for this study is summarised in Figure 7. Over 77% of the foreign firms interviewed were from the advanced economies but a growing trend for FDI from

Figure 2. FDI flows into the Johannesburg-Maputo Corridor



Source: Kollamparambil and Joojee, 2017, based on fDi Markets data

Figure 3. Share of Johannesburg in total corridor flows by activity, 2003-2014, (percent)



Source: Kollamparambil and Jogee, 2017, based on fDi Markets data

emerging economies is apparent with the more recent entry of, notably, Chinese and Indian firms. The bulk of firms interviewed (62%) were wholly-owned subsidiaries, with 31% reporting partnership with local Black Economic Empowerment (BEE) partners. A majority of the firms (62%) had entered South Africa post-apartheid.

While the investors from emerging economies showed acquisition as the favoured mode of entry, firms from advanced economies were more likely to enter through greenfield investment. Differences in ownership patterns between firms from advanced and emerging economies are also apparent, with the former more likely to be wholly-owned subsidiaries and the latter operated in partnership with local firms. Among the manufacturing firms interviewed, over 70% of firms were from the engineering industry, 15% from automobile and the remaining

15% from chemicals. Over 85% of the firms in the manufacturing sector reported either direct or indirect dependence on the mining industry. The continued importance of the mining industry in Johannesburg is hence highly apparent.

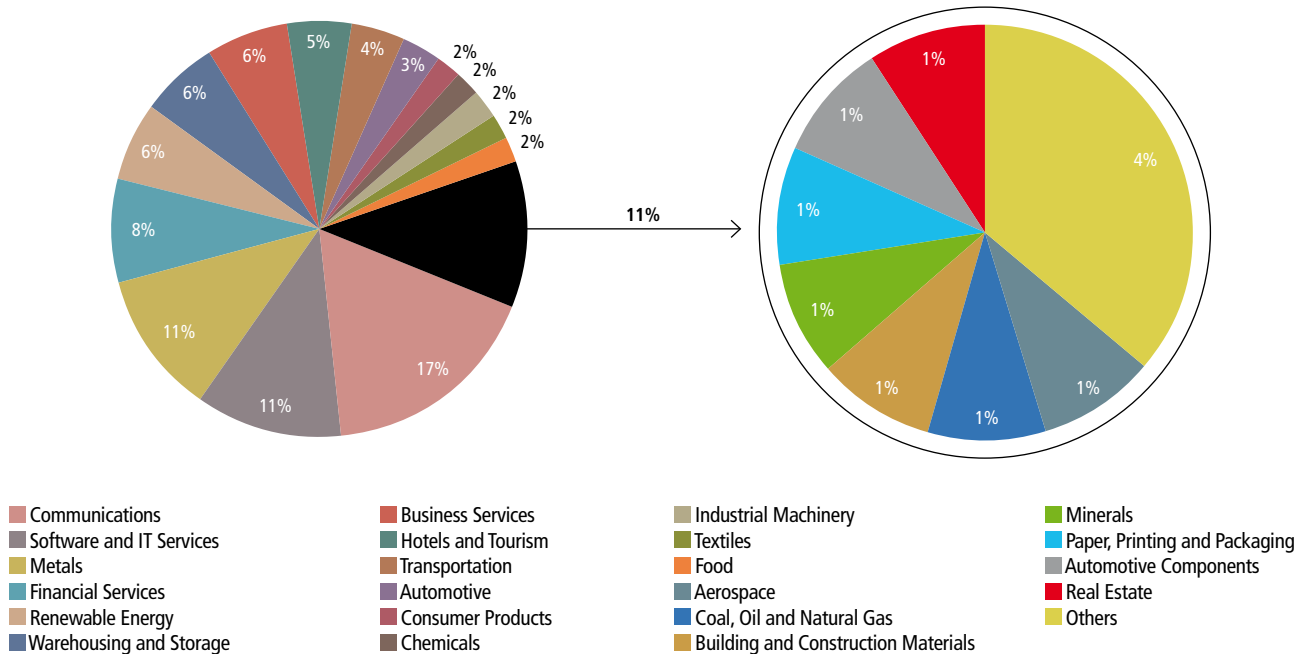
Locational advantages of Johannesburg

The two most important factors highlighted by foreign firms in their decision to locate in Johannesburg are the city's advantageous agglomeration size and the world-class infrastructure that links Johannesburg to the rest of the world.

Agglomeration size

Foreign firms cited agglomeration in the interviews in response to the question of why they chose Johannesburg as the location of their head-office in

Figure 4. Johannesburg FDI sectors, 2003-2016



Source: Kollamparambil and Jogee, 2017, based on fDi Markets data

South Africa, even while their operational branches are located elsewhere. Proximity to customers, sources of raw material and also availability of skilled workers formed the basis for this argument. Johannesburg contributes over 16% of South African GDP (HSRC, 2014), more than any other city in South Africa, and hence weighs favourably as an ideal location when it comes to the influence of agglomeration. The bulk of support and other skills are also more concentrated in the Johannesburg region. Proximity to regulatory institutions such as the South African Revenue Service (SARS), the South African Reserve Bank (SARB) and commercial banks among others were also cited as important in the consideration to locate their head-offices in Johannesburg.

Physical infrastructure

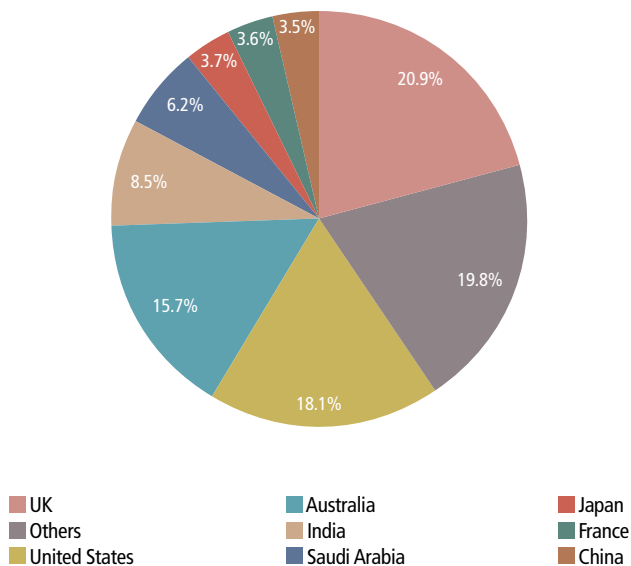
Many foreign firms chose to locate their headquarters in Johannesburg due to the city’s superior connectivity with the rest of Africa and the world. South Africa is viewed as the gateway to Africa and especially the Southern African region. It has been described as a vibrant commercial and investment hub, given its high level of international accessibility with a world-class international airport, a good roads network

Many foreign firms chose to locate their headquarters in Johannesburg due to the city’s superior connectivity with the rest of Africa and the world

linking it to ports and other parts of the country. Foreign firms that either transport their goods to other countries in Africa and/or require import of inputs for production mentioned the South African coastal ports in the Maputo Corridor (Richards Bay and Durban port). Some referred to other maritime ports in the country, like Port Elizabeth and East London. None of the interviewed firms used the port of Maputo, claiming that passing through Mozambique and the South African customs is cumbersome. The Richards Bay and Durban ports have in general been described as world class, although some firms stated that the Port Elizabeth and East London ports need upgrading.

All firms interviewed use clearance agents for dealing with customs at the ports and did not face any direct problems with clearance processes. None

Figure 5. Sources of FDI in Johannesburg (%)



Source: Kollamparambil and Joojee, 2017, based on fDi Markets data

had experienced difficulties with clearance agents and generally considered the entire process smooth. With land borders, the foreign firms did not find issues with customs at the South African side, but had problems with the other country border controls, especially within the African continent. The suggestion was made to have a ‘single window’ for border control management, where individuals go through one border control for two countries, rather than two different and subsequent controls. This would facilitate speedier processing and reduce border delays.

The most constraining factor that the companies brought up is the state of the Transnet rail system which, ideally, should be the most efficient and cheapest way to transport goods to the ports and borders. Firms described Transnet as a ‘shambles’. The road system is therefore the favoured transportation mode for goods throughout the country. It is costlier than the rail system but more efficient in terms of delivery time.

Information and Communication Technology (ICT)

The firms interviewed noted the high cost of ICT in the city, driven largely by higher internet costs. Nevertheless, the firms acknowledged that both the availability and reliability of ICT are good in

Johannesburg. This makes it easier to bring in and implement newer technology in the city, however at a higher cost, which reduces market penetration. The foreign firms interviewed in the ICT sector were of the view that the technology market is not as saturated in South Africa as in some advanced economy markets and there is potential for growth and great scope for technology diffusion in South Africa through increased market penetration. This, however requires better pricing for the market to be widened.

Labour costs

The low cost of labour was highlighted by foreign firms as giving Johannesburg a competitive edge over advanced economies. One of the German engineering firms interviewed said South Africa was the centre of their global value-addition chain because of the lower labour costs compared to the parent country.

The role of government: policies, regulation and incentives

Foreign firms’ investment decisions are influenced greatly by policies, regulation and incentives at all tiers of government. For all foreign firms interviewed, the Broad-Based Black Economic Empowerment (BBBEE) legislation enacted by the government seems to be the major discussion point. The incentives offered by the national government seem to have a greater impact on attracting foreign investment than those offered by local government.

National-level transformation policy

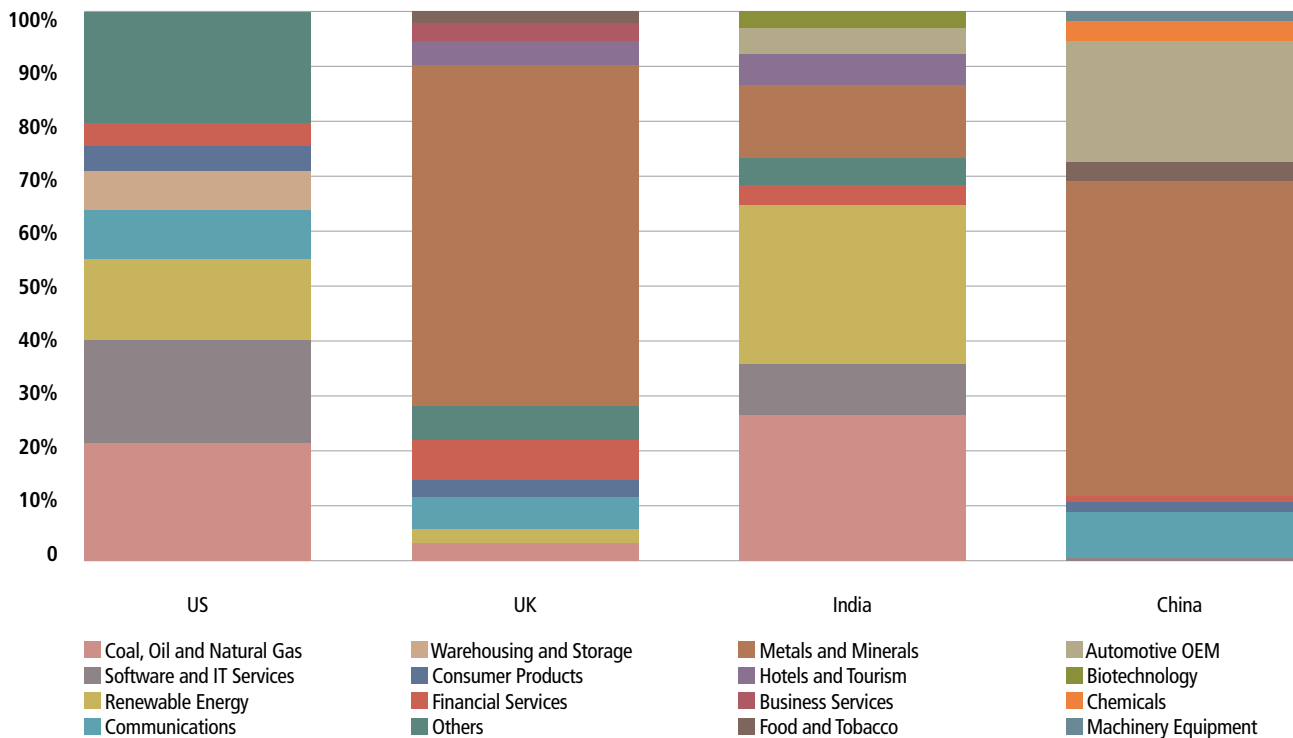
While the advent of democracy saw most citizens gaining franchise, democratic South Africa inherited a highly inequitable and fractured society, its unequal character epitomized by the city of Johannesburg. The national government initially institutionalized Black Economic Empowerment (BEE). In response, mining and other foreign companies attempted BEE compliance by transferring equity and management representation to a select few black individuals. The policy therefore became controversial and attracted criticism because it allowed for a few individuals to amass extreme wealth. Subsequently, the affirmative action Broad-Based Black Economic Empowerment (BBBEE) policy was launched to correct the shortfalls of BEE through ownership and management control; preferential skills development; socio-economic development; as



The road system in South Africa is favoured over rail for the transport of goods because of the state of the rail system

©Anke Van Wyk

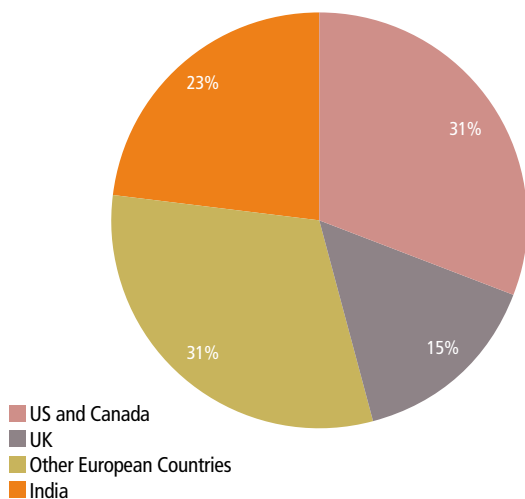
Figure 6. Source-wise distribution of FDI across industry sectors



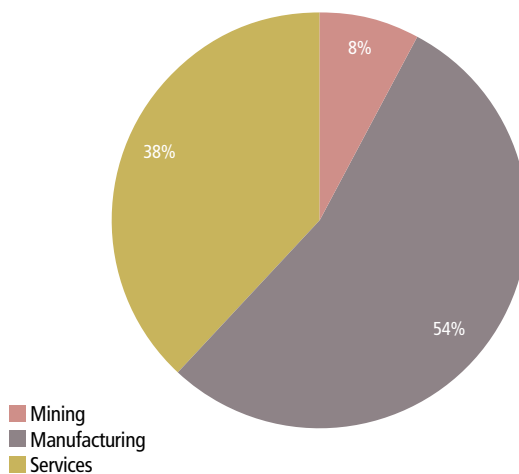
Source: Kollamparambil and Jogee, 2017, based on fDi Markets data

Figure 7. Summary profile of foreign firms interviewed

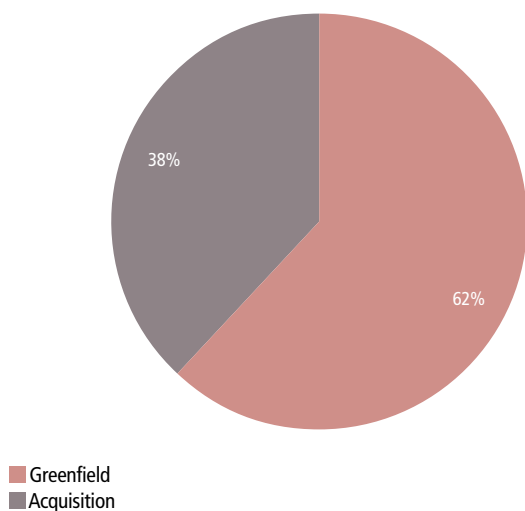
Country of Origin



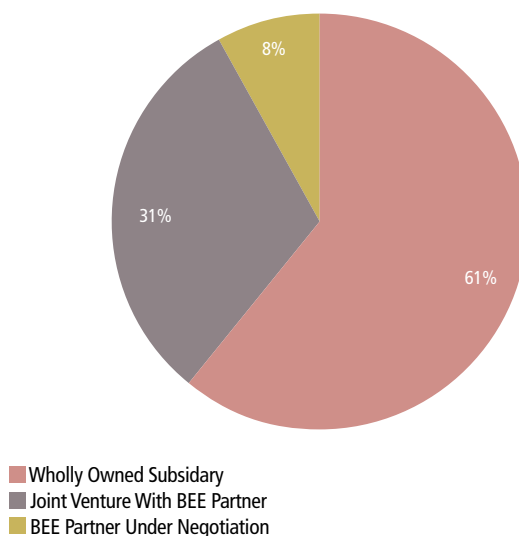
Industry Sector



Mode of Entry



Ownership Profile



Source: Kollamparambil and Joojee, 2017, based on firm Interviews

well as enterprise and supplier development (the five elements under the 2015 BBBEE Code).

The BBBEE legislation is supported by and functions in conjunction with various other forms of legislation, including the Employment Equity Act, the Skills Development Act, the Preferential Procurement Framework and others.

Matters relating to transformation and, specifically, the BBBEE were highlighted as significant issues faced by all the foreign firms

interviewed. While the majority of these foreign firms ruled out dilution of parent equity holding due to the global policy of the parent company maintaining full ownership, they admitted BBBEE seriously hampered business expansion in South Africa, since they could no longer compete in the public sector procurement market. Some foreign firms interviewed embraced ownership obligations under BBBEE by creating joint ventures with local companies to achieve BBBEE compliance or by

transferring partial ownership to employees through trusts created for that purpose. Most foreign firms interviewed were in the process of complying with the new set of codes introduced in 2015 that would enable them to retain their BBBEE certification levels achieved prior to 2015.

Ownership and management control elements of BBBEE aside, the greater weight assigned to procurement and enterprise development under the new 2015 codes, has laid emphasis on preferential procurement by foreign firms under the Preferential Procurement Framework Act which stipulates that foreign firms are required to obtain BBBEE certification to conduct business with government. Such foreign firms have to ensure that their own vendors are also BBBEE compliant. In this manner, the benefit of the preferential procurement framework is expected to percolate down to smaller firms that have no direct dealings with government. The suppliers

Some firms complained of shortfalls in the availability of black African skilled technical workers, as such workers were in high demand across the industry and tended to indulge in 'job hopping'

to the manufacturing foreign firms also registered their efforts to comply with BBBEE as a necessity to continue business with the foreign firms. The trickle-down effect of the policy is therefore very visible in the manufacturing sector but not in the tertiary sector.

All foreign firms that were interviewed from the manufacturing sector complied with BBBEE certification through securing the right ethnic profile of employees and by providing training and skills development for apprentices. Some firms complained of shortfalls in the availability of black African skilled technical workers, as such workers were in high demand across the industry and tended to indulge in 'job hopping'. Consequently, foreign companies have to pay a 'black premium' for such personnel. Most manufacturing foreign firms interviewed took in apprentices from disadvantaged backgrounds and provided training, because that not only allowed points under BBBEE, but also access to the Sector Education and Training Authority (SETA) grant

for skills development. Some of the foreign firms interviewed claimed they were absorbing a select number of apprentices into their payroll at the end of the programme, but the numbers were negligible. To summarise, BBBEE regulations brought out some mixed feelings and comments from the foreign companies. While some found them to be a hindrance to business and costly to some degree, most of the firms accepted the legislation as being morally right.

City policy for transformation

Matters of ethnicity-based socio-economic inequality and dangerously high levels of unemployment aside, Johannesburg faces further structural challenges. Although the origins of economic activity in the city of Johannesburg started out in the primary and secondary sectors, there has been a significant shift towards the services sector. The growth of this sector does not fit the supply of the huge cohort of unemployed in the city. Moreover, the distribution of economic activities is highly uneven across the city and not well aligned with areas where a majority of the population lives (City of Johannesburg, 2014). The city government has put in place spatial policies to correct the inequalities of apartheid planning within the city which has contributed to a spatial concentration of deprivation based on income, employment, health, education and the living environment (JDA, 2014). The Corridors of Freedom project, which will let Joburgers live closer to their workplace, is expected to transform entrenched settlement patterns through incentive schemes such as the Urban Development Zone (UDZ) tax incentive for the revitalization of certain urban areas. Although not specifically aimed at attracting foreign direct investment, the tax incentives under the UDZ are open to foreign and domestic firms alike. However, FDI attraction through UDZ has proven limited (JDA: 64). The government's vision of transforming the city is through multiple small investments into the real estate and services sectors rather than a single mega project. Consequently, it is local rather than foreign investment that has responded.

As in most African cities, migration is a big issue for Johannesburg (Golooba-Mutebi, 2017). Every month, the city of Johannesburg receives around 10,000 migrants from other parts of the country and the continent and, therefore, constantly faces 'shifting goal posts' when it comes to transformation through providing

employment and adequate housing. To contain the unemployment, which is close to 35%, the city is also trying to develop manufacturing hubs and is promoting industrial clusters of furniture, textile and clothing manufacturing, in addition to the ICT and knowledge-based tertiary sector. Again, there is little evidence of success in attracting FDI into these priority economic sectors.

Labour laws

Some of the country's labour laws were found to be restrictive and too complicated, especially for companies whose work is mostly project based. Some firms indicated that recruitment was undertaken only after much thought and deliberation given the difficulty in shedding superfluous employees under the current labour laws.

Government as customer

The government procurement market accounts for 9% of GDP and is consistently increasing over time in South Africa (Kollamparambil, 2014). It is therefore not surprising that some foreign firms in South Africa derive a significant share of their revenue from the public sector. Some supply government directly with products and services, while others are involved in infrastructure upgrades and development, providing new and better technologies, with the South African government part of their customer group. They have to lobby the government constantly to work on policies that favour them.

Incentive schemes

Industry clusters and Special Economic Zones promoted by the national government are seen to influence the location of foreign investments. However, given the densely urban nature of the city of Johannesburg, such mega projects have been located in other parts of the Johannesburg-Maputo corridor. Nevertheless, the head offices of such investing firms prefer to locate in Johannesburg because of location advantages.

Investing firms benefit from government incentives, like the Skills Education Training Authorities (SETA) mandatory grant refund, which provide for corporate tax returns on funds spent on training. Export Marketing and Investment Assistance (EMIA) is such a scheme aimed at partially compensating exporters for costs incurred in developing export markets. However, none of



Over 85% of firms in the manufacturing sector reported a direct or indirect dependence on the mining industry



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the foreign firms interviewed mentioned it as a significant incentive, but a local competitor did. One foreign mining firm interviewed emphasized a need for differential duties on imports aimed at the production of export goods.

Red tape and coordination between levels of government

Many foreign firms found compliance with some of the government regulatory policies restrictive to their businesses. Successful investment promotion and development requires coordination between various tiers of government. While both the city and the province of Gauteng operate within the framework of the National Development Plan (NDP), very often both the approaches and underlying ideologies differ between tiers of government. Consequently, development can become a contested space. The City of Johannesburg follows a policy of multiple small projects distributed across the city, while provincial and national governments tend to promote mega projects. Take, for instance, the much-publicized megacity development at Modderfontein, promoted by the national government, but delayed in part due to tardy clearances by the City of Johannesburg. The need for all three tiers of government to understand development and the role of investments in the same language is a critical necessity for attracting and nurturing foreign investment. To this end, the establishment of an inter-governmental clearing house to support investors was announced in 2015 to help reduce red tape and bottlenecks and make South Africa more investor friendly.

Exchange controls

One of the interviewed firms cited difficulties in repaying loans from its foreign parent company due to South Africa's exchange control regulations. None of the other firms cited exchange controls to be overly restrictive.

Bilateral and regional agreements

The foreign firms interviewed all appreciated South Africa being part of the SADC community which enabled Johannesburg to become the springboard for an expanding business relationship with other Southern African countries. Nevertheless, the need for separate visas rather than one single visa for all SADC countries for non-South African passport holders was found to hamper easy mobility within

SADC for expatriates employed by the foreign firms. The BRICS association did not feature as an important factor, even for firms from other BRICS countries. There was optimism that with the establishment of the New Development Bank with its regional headquarters in Johannesburg, BRICS will play a more important role in the future. The decision of the South African government to terminate its bilateral investment treaties (BITs) with Germany, the Netherlands, Spain and Switzerland did not overly concern the foreign firms interviewed.

Linkage impact of foreign firms on the economy

Foreign firms create positive linkages and spill-over effects through development of the local supplier base, creation of employment, changes in work culture, gender parity and through corporate social responsibility. By the same measure, the presence of foreign firms can also have a negative impact through curtailing local competition. Some of these issues are discussed in this segment.

The survey revealed that more technology-intensive inputs are imported rather than sourced locally, especially in the chemical and engineering sectors

Local supplier firms

The survey revealed that more technology-intensive inputs are imported rather than sourced locally, especially in the chemical and engineering sectors. The foreign firms in Johannesburg and South Africa are increasingly acknowledging a need for local suppliers in line with the BBBEE charter. Current local sourcing predominantly includes stationery, consumables, furniture, water-cooling, sales and marketing services, public relations, events, sub-consulting, security services and travel services.

Local competitor firms

None of the foreign firms interviewed named local South African firms as their major competitors for the South African market. The competition for the South African turf is from other foreign firms. This

is of concern, as it indicates a lack of competitive capacity on the part of South African firms while the highly concentrated nature of many of South African markets (Fedderke and Simbanegavi, 2008) has given rise to collusion and price fixing.

Both of the South African firms interviewed that claimed to compete with foreign firms pointed out that, whereas foreign firms had a technological advantage, South African firms had a price advantage that enables them to compete at a different level. Local companies also attributed their ability to retain market share in South Africa because of BBBEE certification. While both firms indicated a need for the government to promote investment in new technology, the local companies interviewed have adopted different strategies to counter strategic technological disadvantages.

The larger of the two local firms has actively pursued (and is currently engaged with) research-based government institutions like the Centre for Scientific and Industrial Research (CSIR) to upgrade themselves to international standards. The second firm, which is relatively new and much smaller in size, is looking for a foreign partner for technological collaboration. The firm's representative stated it was open to foreign direct investment as well, but expressed disappointment with government support structures and claimed to not have received any financial support despite being a level-1 BBBEE company (100% black ownership). This firm, while still struggling to find its footing, has been set up by a former employee of a foreign firm, and this can be highlighted as part of the spill-over benefit expected from the presence of foreign firms. But, unfortunately, such instances are rare in the South African context.

Moreover, the little competition that does exist between South African and foreign firms cannot be said to be competition between equals. The South African firms appear to be the "David" in their competition against the "Goliath" foreign firms.

Job creation

The presence of foreign firms in South Africa has boosted local employment, both directly and indirectly. Indirect effects would include jobs created through the development of franchises, shops selling their products, and service providers. Direct employment at the companies includes permanent and contract jobs, with project-based businesses having many contracted employees. Measuring

the impact of job creation by foreign firms is very complex, but one can assume that it represents a quite substantial value. Through the BBBEE, most companies are looking to employ previously disadvantaged graduates, but the firms interviewed cited a shortage of individuals from disadvantaged backgrounds with the necessary skills.

Gender parity

Gender parity is still a distant reality. All the firms interviewed are male-headed with only a few women by ratio in the top management positions. This gender divide is also apparent at lower levels, based on the engineering firms interviewed where males dominated the factory floor even though gender-support programmes and strategies have been developed to promote greater gender parity in those industries. Some companies are actively seeking female employees to improve the gender balance among the staff in their companies.

Training and skills development

Foreign firms in South Africa spend a great deal on training and skills development for local employees. There are many types of training they implement among their workers, but most are specific to the job requirements. In some cases, international professionals are brought in to train local professionals towards the long-term goal of local professionals fully running operations. Some training is 'on the job' (experiential training), either in-house or at operation sites. Some companies rely on universities to train their employees through their studies. Foreign firms also send individuals for training to their headquarters or to their other subsidiaries overseas to empower them and expand the diversity of their knowledge. Virtual and online training courses also exist and are run by instructors from other countries.

Social inclusion

The corporate social responsibility of foreign firms was found to be determined by the minimum requirement of the socio-economic development component within the BBBEE regulations. The foreign firms interviewed provided many examples of how they have promoted or facilitated social inclusion in South Africa. These include encouraging entrepreneurial SMEs; providing funding and support to the building of new schools and clinics; supporting rural farmers; providing free online

education portals for students and free online textbooks; investing in education upliftment programmes/academies offering free courses to the previously disadvantaged, particularly in the IT fields, engineering and sciences; sponsoring of sports events; providing support programmes for women coping with a male-dominated workplace; setting up of diversity programmes for people of different ethnicities to empower previously disadvantaged people and overall create an inclusive environment; going to rural areas to source prospective employees and training them; and also providing bursaries to needy university students. City officials who were interviewed, however, were of the opinion that the foreign firms were doing the bare minimum required under the BBBEE rather than being motivated by leaving a lasting legacy.

Environmental sustainability

The larger foreign firms from advanced economies that were interviewed came across as highly conscious of the reputational (i.e. brand) risk involved in flouting international environmental standards. They claimed, for this reason, to abide by more stringent norms than those dictated by the host government. Foreign firms from advanced economies also claimed they were taking measures to ensure that they consider environmental sustainability and climate change mitigation in their operations, but more to satisfy the South African regulations. These firms were of the view that, while South African regulations were world-class on paper, monitoring and evaluation was wanting due to a lack of human capacity.

Challenges to doing business in Johannesburg

Although Johannesburg is afloat with great opportunities, there are challenges facing foreign firms doing business in the city. Most of the constraints that came out in the interviews relate to the country-level rather than those specific to the city.

Locational disadvantages

When asked why foreign firms with head offices in Johannesburg chose to undertake production operations elsewhere, the responses indicated that the decision was primarily driven by the location of resources (mining), specialized industry clusters (automobile) and the high cost of land in the city (manufacturing).

Skill shortages

Shortages of skills needed in their industries is experienced by many firms in Johannesburg. Most commonly lacking are technical, engineering, commercial and financial skills. Some companies stated further that certain government regulations make it difficult to bring in expatriates to supplement local skill availability. Others feel that BBBEE regulations add to the skills shortage since finding the right skills among black Africans can be very difficult. Consequently, companies have to train local people, which increases their business costs.

Labour laws and labour militancy

Firms mentioned their difficulty in quickly adapting to fluid market situations, such as exchange rate fluctuations and political instability, because of stringent labour laws. Some of these problems, to some degree, affect future potential investments. However, one firm cited not just improved labour relations but also enhanced labour productivity after a BBBEE deal to transfer part ownership of the company to the workers. In addition to labour laws, labour

relations have also been challenging, especially in the mining sector. Unionized worker strikes obviously affect industries negatively; some directly and others by knock-on effects through business channels. A US firm cited having to shut down for two days because willing labour was prevented from working by the striking workers of a neighbouring Japanese firm. In recent times, the South African mining industry has been marred by strikes demanding higher wages. The most infamous one occurred in 2012 when a confrontation between police and mineworkers at a UK-based multinational with its headquarters in Johannesburg turned violent and led to the deaths of 34 mine workers at Marikana.

Transport and communications infrastructure

Most foreign firms interviewed were of the view that the infrastructure in Johannesburg and South Africa as a whole is deteriorating due to the lack of maintenance, leading to the flagging condition of roads and the Transnet rail service. Some companies cited problems with Telkom, the country's telecommunications service provider, because of the



Richards Bay was highlighted by firms for its importance to imports and exports

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tardy repair of damaged lines or stolen cables. The increased costs of communication were mentioned as particularly impacting on ICT-based companies.

Rural infrastructure

Some firms expressed dissatisfaction with rural infrastructure in some parts of the country, which is affecting their ability to get their products into different markets in a timely fashion. The ICT sector, for example, needs to connect rural areas but a lack of roads and electricity makes this a difficult endeavour. Some companies decided to build their own roads to get to people to those areas, which has increased their business costs.

Electricity and water

Inconsistency in the delivery of some government-provided utilities in Gauteng has also affected businesses and increased operation costs. The firms were happy that the electricity supply was back to normal after two years of uncertainty and load shedding, but complained about the huge fixed-investment cost they had to maintain an uninterrupted power supply. Concerns were also expressed about future water provision.

Crime

With higher crime incidence in areas near their businesses, foreign firms have to spend more on security. Some companies have had their trucks hijacked and goods stolen. Likewise, theft of telephone cables also affects their productivity. Worker safety has, consequently, become a matter of concern, especially to firms bringing in skills from elsewhere for skills transfer. Some companies have lost good workers after they had become victims of crime.

Rand depreciation

Many firms lamented the high volatility and sharp depreciation of the South African Rand over the last two years, because it had caused not only higher costs for the importation of components in production processes, but also greater capital expenditures to upgrade technology and/or increase capacity. However, firms that either competed with imports or supplied to firms that compete with imports had been positively affected. For example, an engineering firm supplying machinery to paper manufacturers in South Africa stated that the Rand depreciation actually saved the industry from devastation by Chinese imports.

Policy and political uncertainty

The single largest constraining factor cited by almost all the foreign firms interviewed is political uncertainty and instability in South Africa. Uncertainties surrounding the Mining Charter, for instance, were most worrying to all engineering firms directly or indirectly dependent on the mining industry. Lack of leadership, uncertainty surrounding the presidential succession and frequently changing finance ministers featured as the most common concerns to foreign companies invested in the country. Political uncertainty has affected some companies immensely, particularly those dependent on new investment in mining.

An agricultural commodities-importing company cited the high cost of wheat import duty and the lack of clarity in this regard. A local firm supplying foreign mining companies complained about the South African Revenue Service's policy of garnishing allegedly outstanding value added tax, which was ultimately refunded without interest after months of dispute. Despite a recent downgrading by rating agencies, firms recognise the ability of South Africa to overcome these challenges under good leadership.

Economic growth

The low levels of GDP growth recorded by South Africa over recent years have constrained the growth of demand. The firms interviewed were of the view that the full potential of the economy could be unleashed only with more enabling policies and with a government providing greater certainty and direction.

Pace of business

Foreign firms from advanced economies like the US and Europe had to contend with the slower pace of doing business in South Africa, especially those companies used to a globalized world pace. Multinationals hailing from emerging economies like India, on the other hand, find operating in South Africa more efficient compared to their parent country.

FDI from the South

Foreign firms from developing and emerging economies felt that they face biased attitudes by being viewed as inferior in quality and technology in the South African markets vis à vis large foreign firms from the advanced economies and South African state-owned enterprises. One Indian firm interviewed thus explained its decision to continue

with the South African name after the local firm's acquisition, so as not to broadcast the new Indian ownership of the company.

Policy implications

Using FDI as a policy tool to address intra-city spatial disparities emerges strongly from this analysis. The investment potential for the less developed southern parts of the City of Johannesburg, which are not only populated with abundant labour but have vast land tracks available, is an opportunity for policy makers to consider. To attract more foreign investment into the urban incentive schemes aimed at the revival of lagging areas of Johannesburg, the city needs to first address crime and illegal occupation of buildings in these areas. Johannesburg compares unfavourably with other cities in the country when it comes to ease of getting electricity, construction permits and contract enforcement. Red tape delays in starting a business compared to many locations elsewhere in the SSA region do not help the city.

Incentives needed from the city government to enhance investment attraction include: a) improving ICT; b) skills development; c) investment in innovation; d) more accessibility to government; and e) improvement in public-private partnerships. Further, the city's policy makers need to consider the determinants that promote FDI across Johannesburg as identified by Wall (2017:40). This study also brought out the need to better align policies at local, provincial and national levels as that would go a long way towards improving the investment environment.

While unemployment is a serious concern in the city, the firms that were interviewed cited stringent labour laws as counterproductive to job creation. A review of the labour policy framework is necessary so that a balance can be struck that both ensures employment generation at the required scale while leaving no room for exploitation of labour. Whereas firms expressed the desire to support transformation of the employment structure, they are constrained by the non-availability of skilled professionals among the disadvantaged groups of society that need jobs. Further government support to improving human capital, especially amongst black South Africans, comes out strongly as a recommendation in this study to make more of the unemployed employable.

Compliance with BBBEE legislation and obtaining an adequate level of BBBEE certification

is the overarching framework within which foreign firms are trying to operate. Therefore, policy certainty in this regard will go a long way to building more investor confidence. The firms interviewed were largely cognizant of the need to correct historic injustices through affirmative action and acknowledged the role of BBBEE to be an essential element in the transformation process. There was, however, criticism of it as adding to the cost of business in South Africa.

The highly segmented and concentrated character of production space in Johannesburg is apparent with technology-based manufacturing and production dominated by foreign firms. Local firms fulfil a role of supporting foreign firms rather than competing with them. There is little evidence of foreign investment crowding in domestic investment. This highlights a need for policy intervention towards establishing structures for financial and technological support to domestic firms. Reducing

The highly segmented and concentrated character of production space in Johannesburg is apparent with technology-based manufacturing and production dominated by foreign firms

the import content of foreign firm production and promoting government support to ensure backward linkages through development of local South African suppliers also came out strongly as a recommendation in this study.

The study further highlights the need to stimulate firms to undertake more value-added exports. Also, differentiating between import duties on products destined for domestic markets and those for re-export would make exports more competitive. Further, government organizations such as the Development Bank of Southern Africa (DBSA) undertaking tied aid and investment is expected to boost investment.

While the firms interviewed expressed general satisfaction with the physical infrastructure such as airports, maritime ports and roads, the need for extensive investment in Transnet - the rail transport system - to strengthen the Johannesburg-Maputo corridor's infrastructure came out as the 'need of



With the opening of the New Development Bank regional headquarters in Johannesburg, firms are optimistic that the BRICS countries will play a more important role for business

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the hour'. Reducing ICT costs is also expected to provide a boost to the attractiveness of Johannesburg as an investment destination. Helpful suggestions are single SADC-wide visas for foreign investors and a 'single window' approach for border control, where individuals go through one border control for two countries together, rather than two different border controls one at a time. These are expected to strengthen the Johannesburg-Maputo corridor, help boost intra-regional trade among Southern African countries and promote ease of doing business in the Southern Africa region.

Our analysis confirmed that foreign firms were not overly worried about the termination of bilateral investment treaties (BITs) by South Africa. It is, however, imperative that South Africa includes its social and developmental interests while negotiating new BITs. A new generation of BITs needs to evolve that is based on synergies between investment policies, the development strategies of the host country and responsible investor behaviour.

It is clear from this study that a 'new generation' policy framework is required that better promotes foreign investment while enabling regulation of investment in keeping with the host country's public policies and responsible investor behaviour.

To conclude, the firms interviewed were cautiously optimistic about their prospects in South Africa. Their main concern is related to political and policy uncertainty. Many firms indicated that new investments were on hold till greater clarity has been achieved, notably regarding the Mining Charter and the political leadership of the country. Many local and foreign firms that supply mining firms were deeply affected by the commodity price meltdown of recent years, fuelled by the Chinese economic slowdown. Therefore, the need to diversify South Africa's economic structure and reduce dependence on international commodity markets while creating much needed employment generation, comes out as the most important challenge that Johannesburg faces in its near future.

Part C | City case studies

Cairo: A Vibrant Investment City

By Alia El Mahdi, Anwar El Nakeeb
and Dalia Barakat

In the distribution of FDI in Egypt by number of enterprises, Cairo has an overwhelming lead with 70% of all FDI enterprises
© Lukas Bischoff







Wholesale and retail trade is the main source of employment in Cairo

© Mohamed Ahmed Soliman

In 2015, Cairo, the capital of Egypt, was ranked the number one African city for attracting FDI by PricewaterhouseCoopers (PwC) and continues to receive a large share of the total inward FDI into Africa. The objective of this study is to understand the determinants of these FDI flows into Cairo, the benefits and challenges to both the host country and the foreign investors, and the impact on the domestic and local economies. This study is mainly based on analysis of secondary FDI data on Egypt, as well as interviews with a variety of stakeholders which include high-level officials from national authorities or agencies, city managers, business associations' directors and high-level representatives from among ten foreign companies operating in the Greater Cairo area.

Cairo is located at the tip of the Nile Delta, about 200 kilometres from Alexandria, Egypt's main port on the Mediterranean in the north and 120 kilometres from the Suez Canal in the east with its major port cities Port Said and Suez.

In terms of population, Cairo is the ninth largest city in the world and the largest city in Africa according to the UN's *World's Cities 2016* report. Cairo is a densely populated and busy city at the centre of Egypt's political, economic and cultural life. It is the seat of the main decision-making bodies (e.g. the Presidency, the Cabinet, the Parliament, the Highest Judiciary Court) and of the major trade and industrial federations, the trade unions and business associations.

The Greater Cairo (GC) region, in Figure 1 surrounded with the red dashed line, includes also parts of the Giza and Qalyoubia Governorates and accommodates about 20% of the country's total population. The GC population was estimated at 22.8 million in January 2017 and Greater Cairo is the largest city in Africa, more than twice the size of Johannesburg, the second largest case study city in this report. The total Egyptian labour force was around 28.4 million in 2016 of which 24.8 million were employed and 3.6 million unemployed. In the GC region 21%

of the total labour force was employed and 21.7% unemployed (CAPMAS, 2017).

Private sector enterprises, whether formal or informal, are the key drivers of Cairo's economy, generating 75% of the total number of jobs. The public sector contributes the remaining 25% of all employment in the GC region (see Figures 2 and 3).

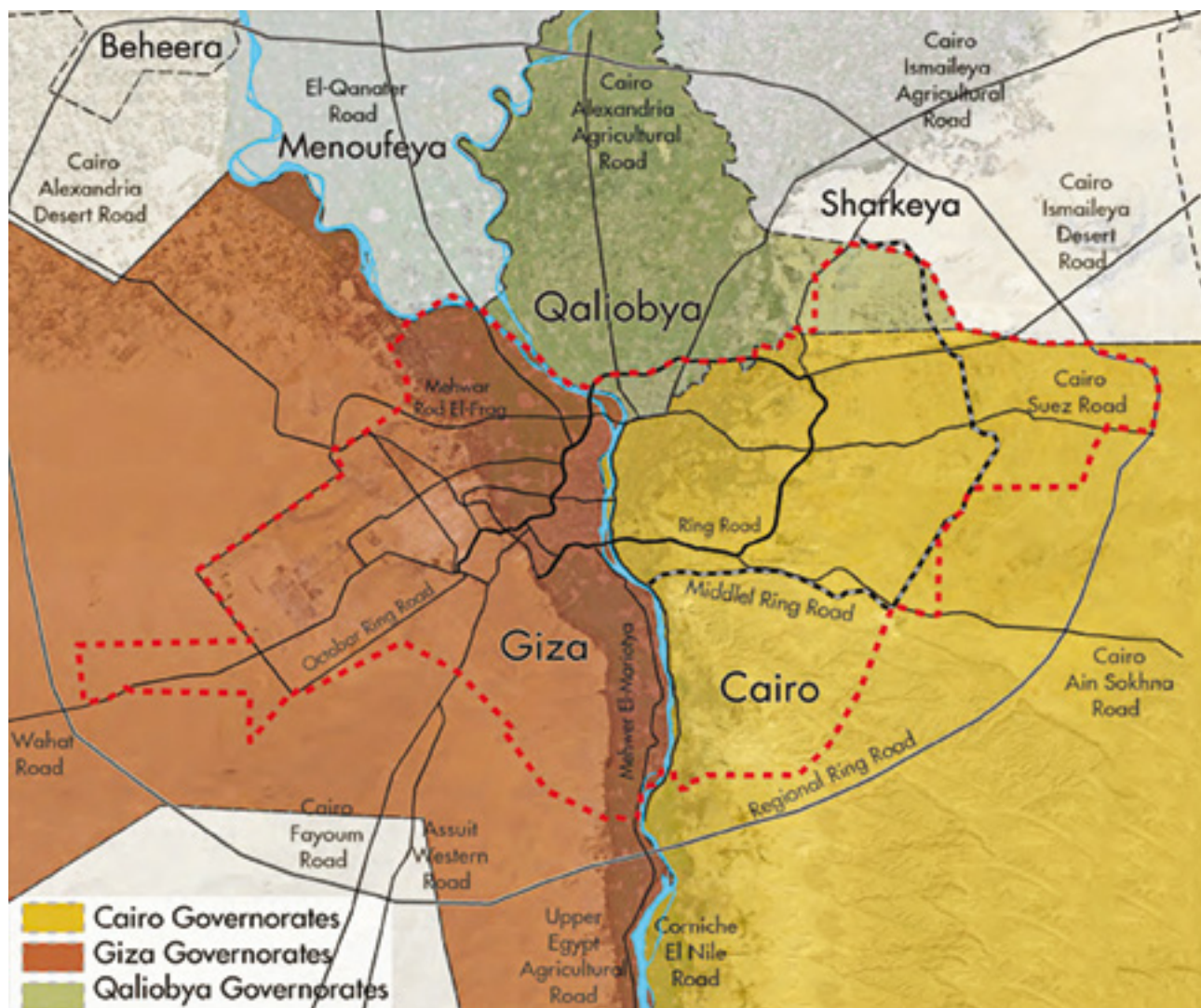
Concentration of economic activities

Cairo has a diversified economy, which includes wholesale and retail trade, manufacturing, construction, transportation, education and health

services and public administration. Wholesale and retail trade and related activities are the main source of employment in Cairo (19%). The GC region's lively and diversified retail scene encompasses everything from street traders to traditional markets (souq) and up-market boutiques. Over the past decade, however, there has been a marked growth in contemporary shopping malls and hypermarkets.

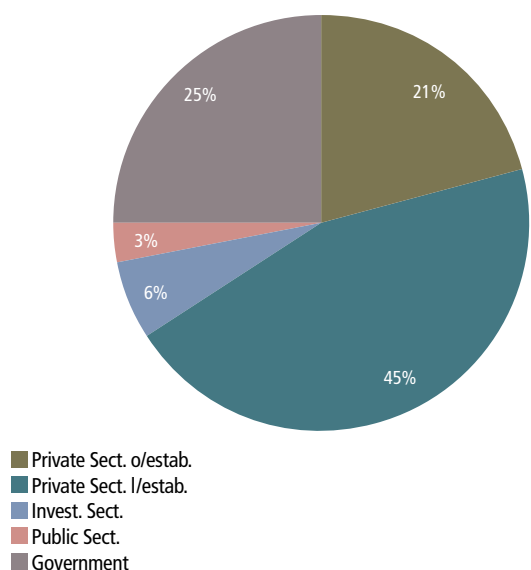
Manufacturing is the second largest economic activity in the GC region in terms of workers employed (see Figure 3). Proximity to highly populated markets and a dense distribution outlet system and proximity to transportation networks, ports and to academic

Figure 1. Greater Cairo region



Source: Nasser, A. 2017

Figure 2. Structure of Cairo economy according to sectors 2015 (CAPMAS)



Source: Mahdi, Nakeeb and Barakat, 2016, based on CAPMAS, Statistical Year Book-Population, 2015

The ICT sector has witnessed a substantial boom over the past two decades and has become one of the leading engines of economic growth in the GC region

research centres and decision-making centres are key factors to locating manufacturing activities in the GC area. Manufacturing is responsible for about 16% of the total employment in the GC region, which includes around 30 industrial centres (see also Online Appendix Part C, 2.1). In addition, 17% of the total industrial areas in Egypt are located in new towns of the GC region. To reduce undesirably high concentrations of population and economic activity, the Government of Egypt (GoE) has established numerous new towns around Cairo and around other cities in the country.

Construction is another important economic activity, responsible for 16% of total employment in the region. The real estate and construction sectors continue to flourish in Cairo due to its large and growing population. In addition, due to the steady devaluation of the Egyptian pound, people tend to invest their savings in assets, especially real estate, to maintain their value.

To estimate the degree of concentration of economic activities in the GC region vis à vis the remainder of Egypt, concentration ratios (CRs) were calculated for each economic activity. These CRs of economic activity show that information and communication technologies (ICT) and real estate are highly concentrated in the city with a CR of 2.4 followed, in descending order, by public administration, financial services and scientific activities.

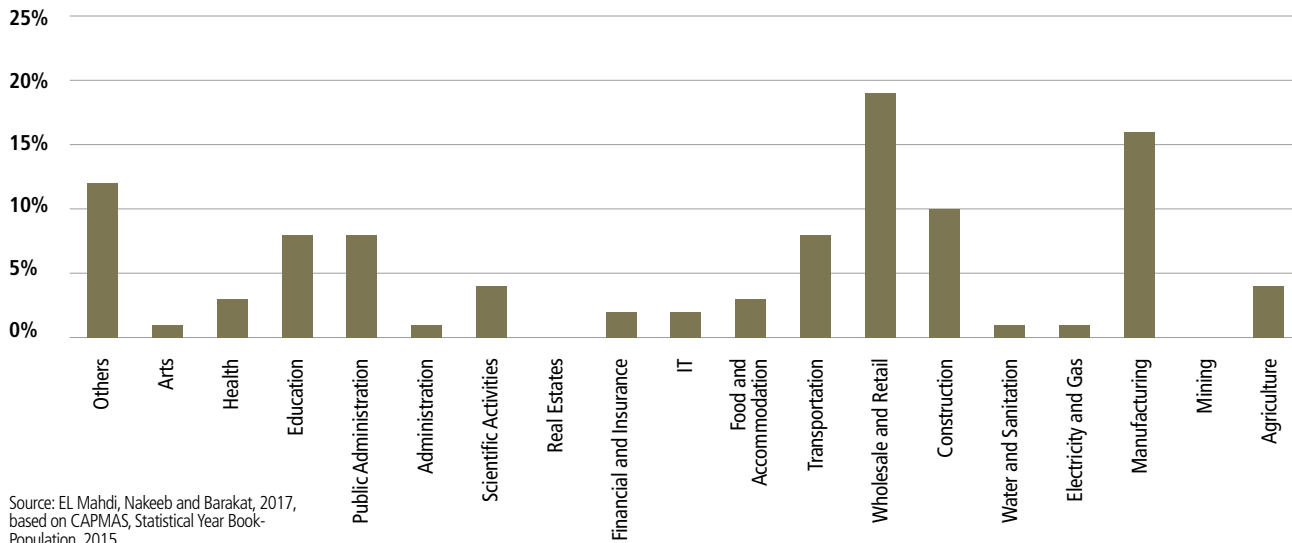
The ICT sector has witnessed a substantial boom over the past two decades and has become one of the leading engines of economic growth in the GC region. The latest data indicate that the ICT sector grew by 8.4% during 2015/2016, second only to construction and building (11%), followed by electricity (7.1%), transportation (5.7%), trade (5.4%) and within an overall GDP growth of 2.3%. Subsequently, the GC region has attracted large multinational companies to benefit from its favourable technology, expertise and capital capacities. At the same time, the GoE developed the necessary ICT infrastructure. Building smart cities has helped by providing a conducive environment for new companies and their different services. Moreover, Cairo boasts a significant concentration of the country's business services (85% of the banking sector's credit creation in Egypt was concentrated in the GC region in 2010) and, as of 2014, enjoyed a 69% premium in labour productivity (GVA per employee) over other parts of Egypt. Instrumental to this difference is Cairo's large pool of highly skilled employees: 24% of Cairo's adult population (aged 15+) held a tertiary educational degree in 2014 against a national average of 14%. The higher labour productivity of Cairo partially translates into higher earnings and household incomes. (HIECS, 2014/2015).

Transportation

Cairo is the hub of all transportation networks in Egypt. A network of highways connects it with all other major cities in Egypt. The roads link Cairo to Alexandria in the North, with Upper Egypt in the South while Ismailia, Port Said and Suez to the East also have road connections with Cairo. In addition, the Red Sea Highway connects Cairo with its eastern coastline and the Sinai Peninsula. In recent years, the GoE has begun implementing a large-scale road network, with most highways linked to Cairo.

The international airport of Cairo is Egypt's main air traffic hub, connecting the country with the world, along with several local airports (Figure 4).

Figure 3. Cairo employment by economic activity, 2015



Source: EL Mahdi, Nakeeb and Barakat, 2017, based on CAPMAS, Statistical Year Book-Population, 2015

In 2006, GC businesses contributed 31% of Egypt’s GDP and the region’s economic growth rate persistently exceeded the national average. Due to this powerful economic base, the GC region has seen a concentrated attraction of inward FDI over the years.

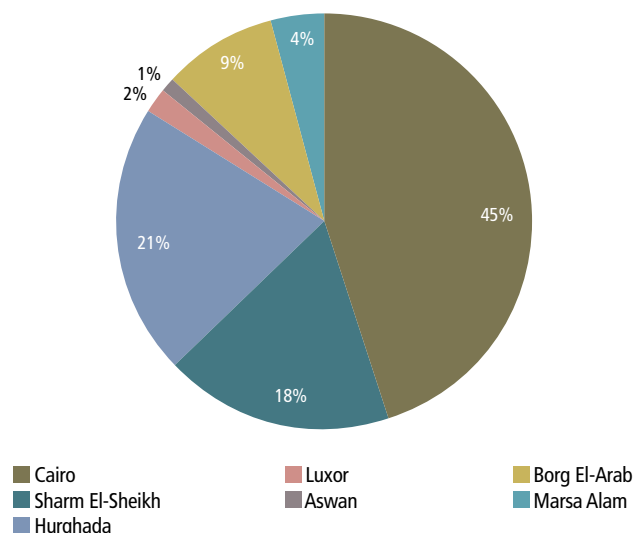
FDI, originating mainly from the EU, the USA and the Arab States, with the UK the largest single-country investor. FDI in Egypt is mainly concentrated in the minerals (oil and gas) sector, followed by construction, telecommunications, financial services and healthcare.

FDI flows into Cairo

Inward FDI reflects foreign ownership of production facilities in host countries. For a company to be classified as FDI-based the share of foreign ownership has to be equal to at least 10 percent of the value of the company’s capital. The investment could be in any economic activity and be greenfield or brownfield investment.

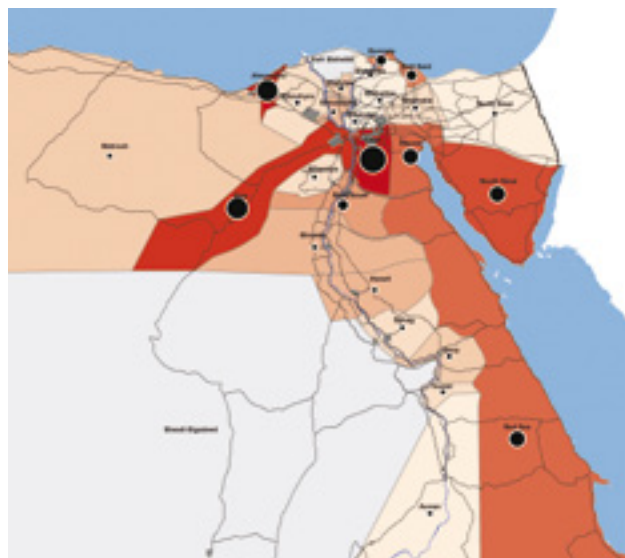
Before the uprising of 2011 (the Arab Spring), Egypt was an attractive destination for FDI. The dynamic growth rate of the Egyptian economy (around 6% annually), its strategic geographical location, low labour costs, skilled workforce, large domestic market and the success of economic reforms all drove up FDI. The events of 2011, however, led to a temporary slowdown in the net inflows of FDI. Investment dropped from USD6.4 billion in 2010 to less than USD500 million in 2011. It picked up again in 2013 to reach USD4.2 billion. Then inward FDI increased from USD4.8 billion in 2014 and reached USD6.9 billion in 2015. According to the UNCTAD *World Investment Report 2015*, Egypt is one of the top-five African countries in terms of attracting

Figure 4. Airports’ traffic movement, 2015



Source: EL Mahdi, Nakeeb and Barakat, 2017, based on CAPMAS, Statistical Yearbook - Transportation and Communication, 2015

Figure 5. FDI companies distributed by number and location



• 1-5 • 6-10 • 11-25 • 26-50 • 51-500

Author: Nasser, A. 2017. Source: fDi Markets

Figure 6. FDI distribution by location and invested capital (USD millions)



• 0-500 • 501-2500 • 2501-5000 • 5001-10000 • 10001-100000

Author: Nasser, A. 2017. Source: fDi Markets

Legal environment affecting FDI

Since the mid-1970s, different levels of government have introduced legislation to increase Egypt's openness to foreign investment. Regional investment policies have affected the distribution of FDI in Egypt through the establishment of Free Zones (FZs), Industrial Zones (IZs), Special Economic Zones (SEZs) and the regional One-Stop Shops (OSS), as well as through regional representation of investment authorities in Egyptian Governorates. Each of these zones provides investors with incentives ranging from exemption from all custom duties on imports and exports in the case of Free Zones, to the provision of infrastructure and land at low cost in the case of Industrial Zones.

Other incentives include allowing imports of capital equipment, raw materials and intermediate goods free of duty or exemption from sales and indirect taxes, besides more flexible labour regulations (SEZ) (US Bureau of Economic and Business Affairs, 2013). The different investment packages as well as establishment of industrial new towns outside the Greater Cairo region have led to a steady shift in investments towards new locations such as the Tenth of Ramadan City and the industrial cities in Upper and Lower Egypt. This shift is a slow one, though.

Cairo: main destination of inward FDI

Despite the numerous industrial new towns all over Egypt, especially in Upper Egypt, there remains a persistently high concentration of domestic and foreign investment in the GC region. The following regional comparison relies on the most recent FDI distribution data in terms of the number of enterprises established, the number of jobs generated, and the amount of capital invested.

In the distribution of FDI by number of enterprises, Cairo is overwhelmingly the leading destination with 70.2% of all FDI enterprises, followed by Alexandria (7.8%) and cities near Cairo (almost 6.3%) (see Figure 5 and Online Appendix Part C, 2.2).

Distribution of FDI by the number of workers shows a similar pattern with Cairo the main city, followed by Alexandria. However, as the size of enterprises increases, they tend to locate in industrial new towns e.g. 6th of October City, and the 10th of Ramadan City (Online Appendix Part C, 2.2).

Distribution of FDI by value of invested capital (see Figure 6), yet again, confirms Cairo in the forefront regardless of company size. Almost 90% of the companies with invested capital of less than USD10 million are located in Cairo and the same applies to

all other company sizes, albeit with some notable variations. As in the case of rising numbers of workers, when the invested capital grows, projects tend to move to industrial cities where the allocated land is more suitable and cheaper for large, capital-intensive companies. Therefore, around 40% of companies with capital sizes ranging between USD100 million and USD500 million are located in industrial new towns, whether adjacent to or farther away from Cairo. The growing concentration of larger companies in new cities is a factor of availability of industrial land rather than geographical attractiveness of these new locations.

Features of FDI in the Cairo-Alexandria Corridor

The *Doing Business Report 2016* points out that the Governorates of Cairo, Giza and Alexandria (the Cairo-Alexandria Corridor) have the best combination of low labour costs, fast response times and ease of starting a business compared with other locations in Egypt. (World Bank, 2014). The following section provides more details about FDI companies in the corridor

(which comprises Cairo, Alexandria and the industrial cities 6th of October, 10th of Ramadan, Sadat and Obour City) and their main features (UN-Habitat, 2012).

FDI companies’ distribution by year of establishment indicates a peak from 2006 to 2010 - a period of high growth and Egypt’s opening up to the world economy. The environment for attracting FDI was conducive during this period due to the fiscal, monetary and trade reforms undertaken. Between 2010 and 2014, the FDI inflow dropped, especially from 2011 to 2013, due to the political unrest associated with the Arab Spring. Inflows picked up again in the following years when the percentage of new FDI companies reached a share of 31% of all companies established during the period between 2003 and 2014 (see Figure 7).

Similar distributions are found when comparing FDI by economic activity and the size of invested capital, on the one hand, and the year of establishment on the other. Figures 7a and 7b show that, while 2006-2010 was a period of growth in the number of companies established through FDI, 2010-2014 saw a decline in that number. However, the latter concerned

Figure 7. FDI companies by year of establishment in the Cairo-Alexandria Corridor

Figure 7a: FDI companies by number

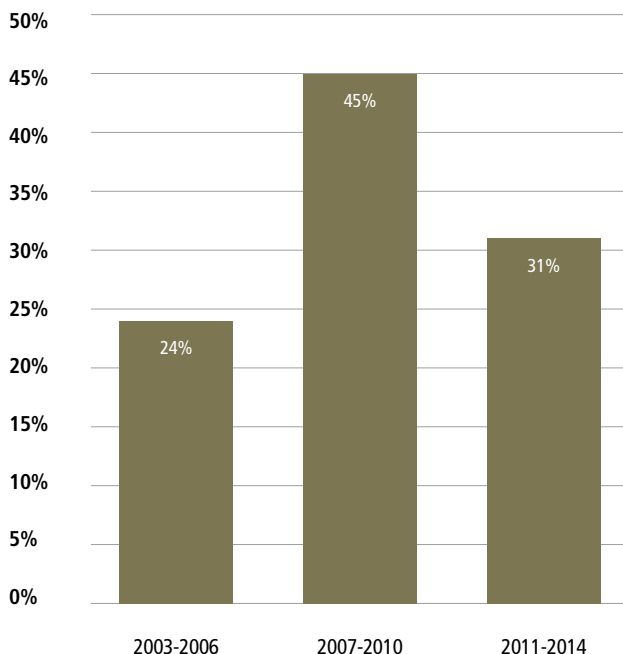
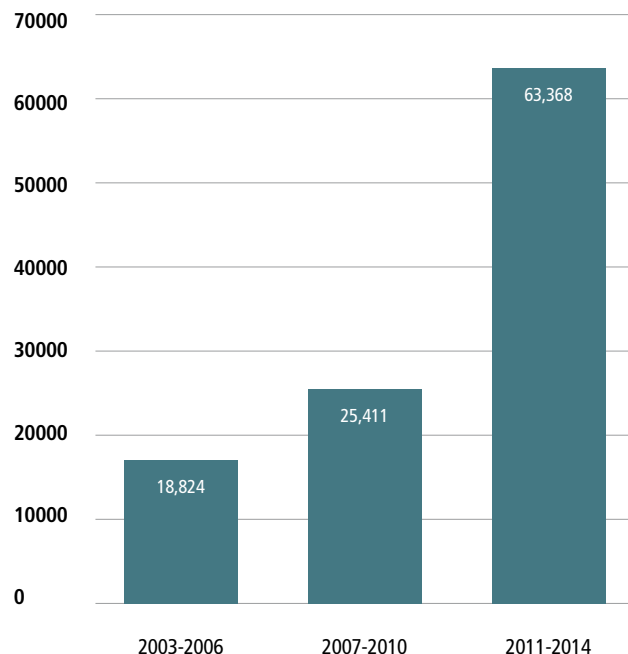
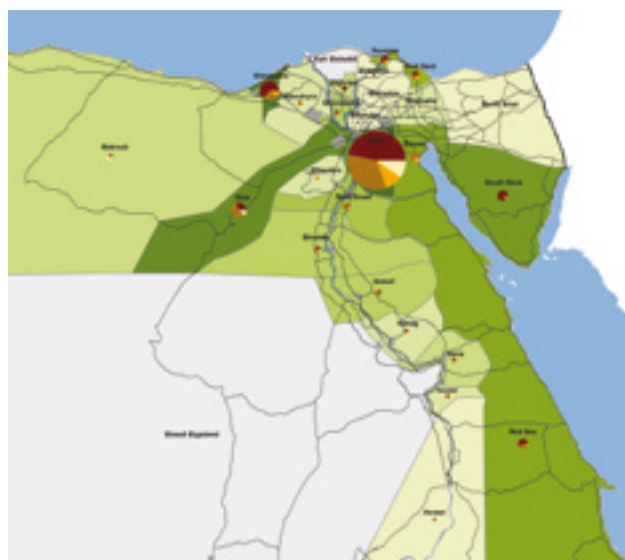


Figure 7b: Total invested capital of FDI companies USD500+ (in USD millions)



Authors: El Mahdi, Nakeeb and Barakat, 2017. Source: fDi Markets

Figure 8. FDI companies distributed according to economic activity in Egypt



■ Services ■ Manufacturing ■ Hi-tech ■ Resource

Author: Nasser, A. 2017. Source: fDi Markets

a substantial inflow of FDI companies with invested capital equal to or larger than USD500 million, as compared to previous periods (see Online Appendix, Part C, 2.5 and 2.6).

As to FDI companies' distribution by economic activity (see Figure 8), business and financial services accounted for 47% of all FDI companies, followed by manufacturing (35%), hi-tech and resources (mining and extraction) with 9% each (see Online Appendix Part C, 2.6). These results are similar to those witnessed in the city case studies of Abidjan and Kigali in this report, where financial services, manufacturing, and ICT companies constitute the majority of sectoral FDI attraction.

When economic activities are reviewed in more detail, it becomes evident that business services, manufacturing, sales and marketing and retail trade companies dominate (see Figure 9).

Here too, location matters, regardless of the type of economic activity and the same pattern emerges with Cairo the main destination for FDI followed by Alexandria. However, some of the large manufacturing, mining and extraction companies tend to locate in the surrounding industrial new towns. This is understandable as industrial cities usually offer larger land plots fitted with the infrastructure at lower cost

and, therefore, are attractive for investment purposes (see Online Appendix 2.7).

FDI companies in the Cairo-Alexandria Corridor are relatively small in terms of the number of workers; 35% of the companies employed fewer than 25 workers, while only 21% of them had more than 250 employees (Figure 10).

In terms of invested capital, FDI companies also tend to be relatively small. The larger ones with over USD100 million constitute only 22% of all companies (see Figure 11).

The most capital-intensive economic activities are resource based (mining and extraction) and, to a lesser extent, manufacturing (see Online Appendix Part C, 2.8). In general, there is a positive correlation between the amount of invested capital and the number of employed workers in the FDI companies operating in the Cairo-Alexandria Corridor (see Online Appendix Part C, 2.9).

In summary, Cairo has been and still is the main city in terms of attracting FDI companies due to its central location between Lower and Upper-Egypt, the large Cairo market and Egypt's proximity to other countries in the region. But Cairo's attractiveness has negatively affected other cities' or regions' ability to attract FDI, depriving them of attention, infrastructure and business services. As a result, some of the population in those disadvantaged regions tended to migrate towards Cairo and Alexandria in search of jobs. Realizing this dilemma, the GoE has established industrial new towns since the mid-seventies. However, it took local and foreign companies time to start locating there. Since the GC space is limited, over the last two decades, new large-scale FDI companies entering Egypt have shown a tendency towards moving to these new, neighbouring or farther-located industrial towns. This movement will help to create a geographic dispersal of centres of economic and social activities and will improve the livelihood of the population settling there.

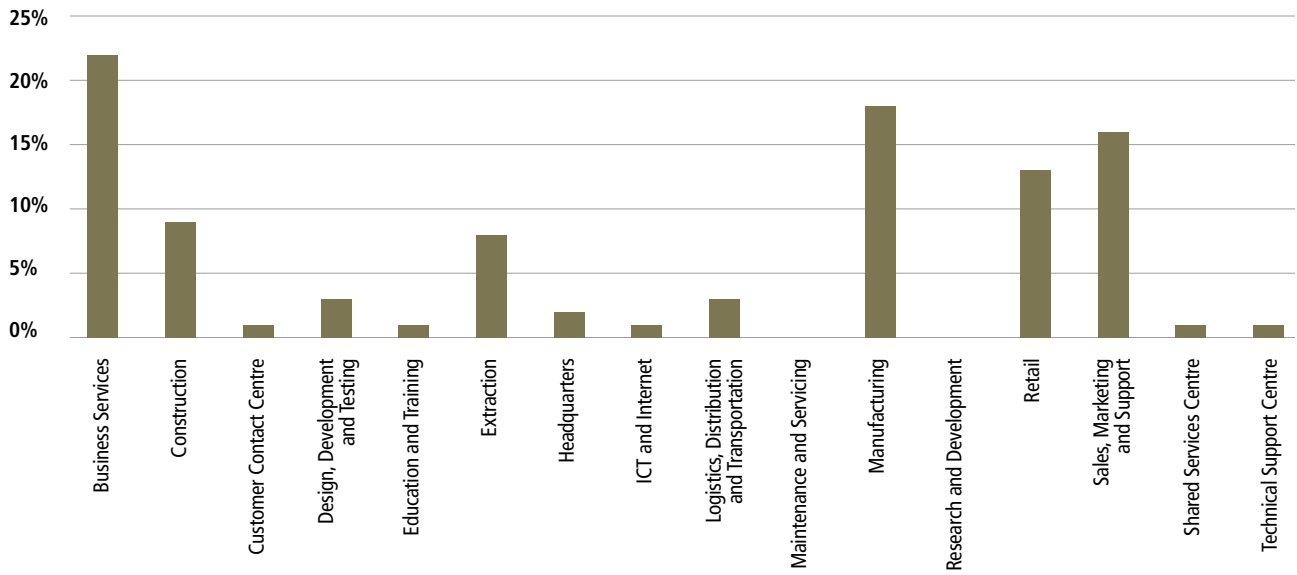
Stakeholder perceptions of Cairo's investment climate

The following section, presents the views of public and private sector stakeholders. To this end, interviews were conducted with public authorities and business representatives.

National FDI investment promotion authorities (IPAs)

The main official Egyptian investment promotion agencies (IPAs) are: a) the General Authority for

Figure 9. FDI companies by economic activity



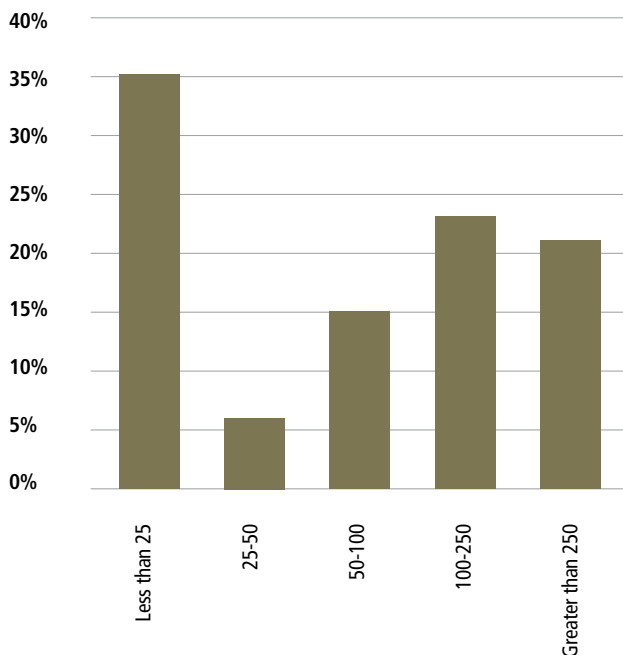
Author: El Mahdi, Nakeeb and Barakat, 2017. Source: fDi Markets



The Cairo-Sinai Peninsula highway. Cairo is connected to all major cities by an extensive road network

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Figure 10. FDI companies by number of workers (2003-2014) in the Cairo-Alex Corridor



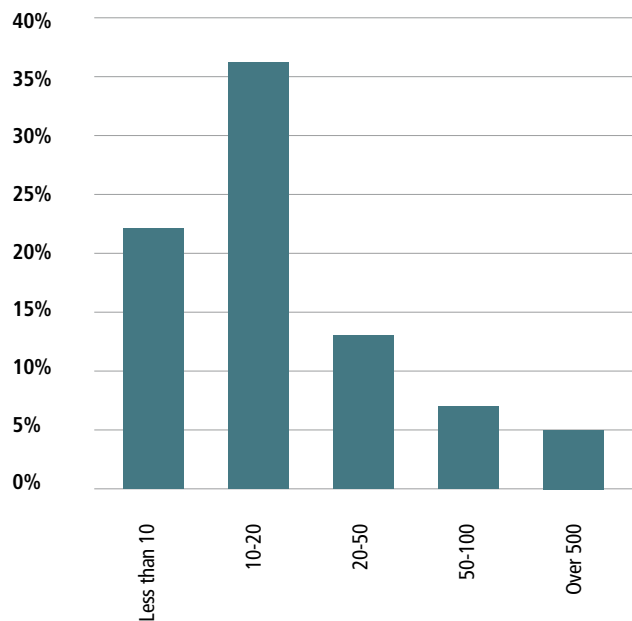
Author: El Mahdi, Nakeeb and Barakat, 2017. Source: fDi Markets

Investment and Free Zones (GAFI), b) the Egyptian Commercial Services (ECS), and c) the Industrial Development Agency (IDA).

The General Authority for Investment (GAFI) is an affiliate of the Ministry of Investment (MoI) and the principal governmental body regulating and facilitating investments in Egypt. GAFI eases the way for domestic and international investors interested in the opportunities presented by Egypt's growing economy. GAFI's key investment approaches are its sectoral strategy that focuses and promotes specific economic activities and its geographic strategy seeking to direct investments to specific locations. However, no strategies are designed specifically for the Cairo-Alexandria Corridor.

Egyptian Commercial Services (ECS) is a governmental trade and investment promotion organization with 56 offices worldwide. It operates within the framework of the Ministry of Foreign Trade and Industry and provides international trade and investment support both to the trade community in Egypt and investors from abroad through diplomacy and contract negotiation. ECS officials interviewed stated that their key strategy for attracting investments is to inform, orient and assist interested

Figure 11. Share of FDI companies by capital invested, 2003-2014 (USD millions) in the Cairo-Alex Corridor



Author: El Mahdi, Nakeeb and Barakat, 2017. Source: fDi Markets

companies. To this end, ECS organizes conferences, seminars and special business missions within and outside Egypt. It provides interested foreign companies with information on starting or expanding a business in Egypt. The goal of ECS' strategies is attracting foreign investors to targeted economic activities rather than particular geographic locations in Egypt. ECS officials expressed optimism because of Egypt's security and political stability, the exchange rate liberalisation, and its recognition of existing challenges and interventions to resolve these.

The Industrial Development Agency (IDA) is affiliated to the Ministry of Foreign Trade and Industry. It is authorized to implement industrial policies, encourage investment in the industrial sector and design policies and mechanisms required to coordinate and connect industrial sector development requirements. The interview with a representative of IDA revealed that their key promotion strategy for attracting investment focuses on integrated industrial investment, managing the state-owned industrial zones and providing industrial land and infrastructure to enterprises in these zones. It aims to provide 60 million m² of land for industrial activities until the year 2020 and

industrial parks that offer investors factory buildings and infrastructure (Turnkey system). IDA managers emphasized the importance of attracting new investments in industries such as food and beverages, engineering and pharmaceuticals.

Whereas GAFI is focusing on Egypt as a whole and IDA on the industrial sector, ECS concentrates on mega projects. The three IPAs' representatives stressed the importance of attracting new FDI to the Cairo-Alexandria Corridor, given that it provides large invested capital, high knowledge-intensity, a large labour pool, strong backward and forward linkages with domestic projects, and high export potential.

To improve the investment climate, GAFI, IDA and ECS officials suggested (and are working on) achieving: a) better facilitation of land allocation towards a clear, comprehensive and integrated investment map through complementary efforts among ministries, authorities and governorates; b) facilitating easier licensing procedures and reducing their cost; c) raising the quality and relevance of education and training in both the public school system and specialized training institutions; and d) the promotion of competition in markets.

Local authorities and FDI

The study team interviewed local authority directors in Sadat City and Obour city who stated that Egypt's investment policy is aimed at positioning the country as a global and regional economic hub for large transnational companies. They stressed the need to make use of the 112 multinational and bilateral trade/investment agreements Egypt is already engaged in. They stated that bilateral investment treaties provide a protective umbrella for foreign investors and their investments and that bilateral and multilateral integrated policies regulate matters related to international investment to encourage new and additional FDI in Egypt.

These local authority directors further stated that the current administrative system in Egypt is one of the most centralized in the world with, for instance, all infrastructure decisions decided centrally. While services provision is executed locally, the central government maintains a strong grip and control over the finance and the administrative systems through which local services are provided (UNDP/INP, 2004).

According to the local authorities, bottlenecks in attracting new and additional FDI to the Cairo-

Alexandria Corridor relate to the difficulties experienced in accessing land, the relatively long investment administrative procedures and continuous change in economic policies. Granting land allocation rights to IDA rather than the local authorities has led to inefficiencies in dealing with investors.

To improve relations with new investment firms, it was suggested that those responsible for land allocation for domestic and foreign investment should first scrutinize candidate investors for their experience and history in the targeted investment activities, with special attention to financial solvency. The distribution of industrial land should also be based on more transparent criteria. In addition, all investment procedures should be unified within the mandate

The ability of large foreign companies to hire skilled labour at higher wages or for better benefits presents a threat to Egypt's micro-, small- and medium-sized enterprises

of one single authority. Lastly, local authorities and business associations must both be involved in policy dialogues on investment matters.

Local authorities also stated that the anticipated impact of FDI focuses too much on employment creation, transfer of finance and absorption of new technology. Although these are important aspects, unfair competition between foreign and local companies is rarely taken into account. The ability of large foreign companies to hire skilled labour at higher wages or for better benefits presents a threat to Egypt's micro-, small- and medium-sized enterprises. Moreover, foreign companies can sell their products at lower prices, as multinationals often get discounts from suppliers for buying in large quantities. All these factors have negative repercussions for smaller firms in Egyptian communities.

Business associations and competitors' relations with FDI

Business association managers mentioned that they offer their services equally to foreign and local investors. Key services include providing effective dialogue with government officials and

authorities, strengthening the role of the business community in economic decision-making processes and promoting more efficient laws and regulations and, thereby, a higher level of performance. They further stated that, since there are few business relations between local investors and foreign companies, diffusion of technology or subcontracting is rare, especially with the industrial sector. This could be due to a lack of forward and background linkages between foreign and local companies. However, this does not preclude those linkages existing with companies outside the GC region.

The business associations' representatives and local competitors stated that investors' relationships with the government do not vary according to

Special requirements exist for foreign investors in particular sectors, such as, for instance, upstream oil and gas development where joint ventures are required

the nationality of the company. The government deals with them equally and no legal distinction is made between foreign and domestic investors, bar a few specific matters. Special requirements exist for foreign investors in particular sectors, such as, for instance, upstream oil and gas development where joint ventures are required. Also, foreigners



The Arab Spring led to a temporary drop in FDI inflows to Egypt from USD6.4 billion in 2010 to USD500 million in 2011

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are not allowed to operate on the basis of sole proprietorships or simple partnerships and any foreign company wishing to import for trading purposes must do so through a wholly Egyptian-owned importer (IBP, 2015).

Regarding the generation of quality employment in Cairo, FDI projects, being mostly large-scale, typically employ large numbers of workers. Employees get exposure to globally valued skills and their training and skills-upgrading enhance the value of Egypt's human resources base. Since foreign companies tend to build new office buildings or factory sites, they provide modern work surroundings. This can include the latest technology, such as worker-friendly lighting and ergonomic computer keyboards, air conditioning, or safety equipment and safety conditions that meet the highest international standards.

Finally, there is no significant crowding out of local companies by foreign firms as the market is large enough to absorb current and future investments. The business associations' aim and the local competitors' expectations of foreign investors, besides job creation, are the attraction and localizing of technology and know-how to Cairo and neighbouring industrial cities.

In sum, Cairo, as the capital of Egypt, is an attractive locality for FDI attraction even though there are no specific public policies designed to boost the Cairo-Alexandria Corridor.

Cairo's business climate

To better understand FDI companies operating in Egypt, ten company managers from different economic sectors in Egypt were interviewed. These companies varied in terms of workers, capital and home country.

Where considerations of establishing their business in Cairo are concerned, all the respondents confirmed that Egypt is one of the largest markets in the Middle East and North Africa with a high purchasing power, a skilled labour force speaking different languages, and a central position between the African, Arab and European markets, alongside favourable cost effectiveness, cultural affinity and time zones.

As to business relations with the government, the responses varied. Those operating in tourism and ICT mentioned having partnership agreements with ministries. Projects and companies in the communications sector are regulated by the National Telecommunications Regulatory Authority (NTRA). Those in the construction sector, however, complained

about complicated procedures for establishing their business, while some had no business relations with the government whatsoever.

The business managers revealed that, like in most other African and Middle Eastern countries or cities, they are challenged by incessant bureaucracy and constantly changing local laws, legislation and taxes. Some complained about the impact on the economy of fluctuations in the value of the Egyptian Pound. Others mentioned the inability to control pricing, without specifically referring to the government. Some complained about fluctuating market demand for their products but, generally, most companies cited a need for more transparency in the government's plans, the importance of political stability and a continuous flow of efficient labour.

Several corporate managers were upbeat about future business opportunities in Egypt and specifically mega projects within the Cairo-Alexandria Corridor, the New Administrative Capital, the Suez Canal Zone and infrastructure projects, notably Smart City projects. Others believed that the devaluation of the Egyptian Pound makes the Egyptian market attractive for foreign investments and that the growing pool of IT competent resources will bring more investment.

Several corporate managers were upbeat about future business opportunities in Egypt and specifically mega projects within the Cairo-Alexandria Corridor, the New Administrative Capital, the Suez Canal Zone and infrastructure projects, notably Smart City projects

Many mentioned the advantages of the large size of the Egyptian consumer market, especially the Cairo market, with its massive purchasing power compared to other countries/cities in the region. Cheap labour, skilled labour at reasonable wages, fuel and electricity pricing were all quoted as conducive to further investments. Many said that they will continue to invest and expand their production and manufacturing capacities, grow their distribution channels, create future jobs and advance technologies as long as these advantageous conditions continue.

Some of the companies' managers claimed to have facilitated social inclusion by organizing events, while others suggested that their company had corporate social responsibility (CSR) programmes such as educating orphans, helping poor children, contributing to food bank and charity projects, and increasing employment and improving the social wellbeing of their workers and families. Other companies added that they contribute to school feeding programmes and that they assist underprivileged women by launching women's training programmes. Most managers stressed that their budget allocation to CSR amounted to millions of Egyptian Pounds each year.

The responses about optimism over future investment in Egypt varied, although there was consensus on the high potential economies in the region if new infrastructure projects are considered along with strategic projects such as the new power stations, the Suez Canal Zone, the National Network of Highways and the new natural gas discoveries. All these forthcoming projects will create a growing economy for better investment. More than half of the managers confirmed their intention to expand in the GC region.

Company managers stressed the importance of improving infrastructure through partnerships between the public and the private sectors in return for privileges. "No benefits from government incentives" was the answer of almost all as there are no specific incentives granted to FDI companies. Asked about business incentives required from the GoE to help spur FDI, the responses varied by sector. Some wished for VAT exemption for IT companies to speed up technological advancement. Others suggested tax holidays and privileges; embedding IT training in all educational institutes; and preferential pricing of power, gas and water supplies to factories. A majority stressed the overriding importance of clear insight in the government's vision for future economic plans and associated legislation so as to better inform foreign companies' future investment decisions.

More than half of the managers confirmed their intention to expand in the GC region. However, since the availability of a skilled labour force helps in the hiring process, improving education with more training tailored to the jobs on offer will not only benefit employment but will also have a positive impact on future plans of investors in Egypt too.



After the fall in FDI in the Arab Spring, inflows recovered to USD6.9 billion by 2015 and PwC ranked Cairo as the number one African city for attracting FDI

Some respondents confirmed that they do not intend to invest away from Cairo, e.g. in other parts of Egypt. Others mentioned that their companies are seeking expansion especially in the MENA region due to their strong belief in the future there.

Finally, Cairo is also a gateway city, a strategic hub for inward FDI into other parts of Africa and the Middle East. Although there are no special strategies in place for marketing and promoting Cairo, the city promoted itself through several evident factors. However, over the last four decades, successive governments have established new industrial cities, notably around the GC region because of limited availability of land in the city. Subsequently, new large-scale projects have gradually been established in neighbouring new industrial towns rather than Cairo



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This study confirms that Cairo, as a rapidly growing city, not only needs to plan way ahead for expansion but planning processes should also be continuous and flexible enough to allow for interim corrections

itself. Currently, the government is building the New Administrative Capital, which will help absorb new wide-spectrum investments in the Cairo-Alexandria Corridor. Thus, the potential for further expansion in the Cairo-Alex Corridor is in the making.

This study confirms that Cairo, as a rapidly growing city, not only needs to plan way ahead for expansion

but planning processes should also be continuous and flexible enough to allow for interim corrections. It should further include establishment of new towns to guide more investment away from traditional locations for better balanced geographical distribution of employment opportunities and population. Egypt also needs to open up new horizons for domestic and foreign investors alike while continuously enhancing intra- and inter-city mobility. Road and railroad networks, electricity, water and sewage networks, housing and social infrastructure as well as developed land allocated to industrial activities are the main factors determining the success of such new cities. Some of Egypt's newly established cities have proved success stories; others have failed because of a lack of social and affordable mobility infrastructure.

Part C | City case studies

Foreign Direct Investment in the Abidjan-Lagos Corridor

By Rodrigue Majoie ABO

Abidjan receives a majority of inward FDI in the Abidjan-Lagos Corridor which comprises nearly 75% of economic activity in the ECOWAS region
© Guillaume Mignot/flickr







Due to its dependency on the cocoa crop, Côte d'Ivoire was adversely affected by the 25% drop in world prices in 2016

© Kouassi Gilbert Ambeu

Through research of existing studies and interviews at different levels of the economic community within Abidjan, this study attempts to provide a better understanding of the economic and foreign direct investments in Abidjan, the economic capital of Côte d'Ivoire and the Abidjan-Lagos Corridor. The interviews shed light on the underlying perceptions of the attractiveness of the city and the perspectives and challenges in attracting FDI and have resulted in a set of recommendations for consideration by city managers, policy makers and other stakeholders.

Within the West African Economic and Monetary Union (WAEMU) region, Abidjan receives a majority of inward FDI of the Abidjan-Lagos Corridor which comprises almost 75% of the economic activities in the ECOWAS region. The Autonomous Port of Abidjan (PAA) constitutes a major infrastructure asset and logistical hub of the Ivorian economy. It also serves nearby land-locked economies such as those of Burkina Faso, Mali, and Niger.

Abidjan accommodates investment inflows from different sectors, but real estate and the hydrocarbon

extractive industry account for more than half of the total FDI (Wall, 2017). Recent developments in the city, notably fluvial transportation and sea port infrastructure, strengthen the city's position as a hub in the Western African region in terms of port volumes and maritime traffic.

The Ivorian economy is highly dependent on the export of its cocoa cash crop, but Côte d'Ivoire is seeking to diversify its agricultural portfolio. Recently, production of cashew nuts and rice has increased. Also, the government aims to stimulate in-country processing of agricultural products and by 2020, take more advantage of the entire agricultural supply chain. Its target is to locally process at least 50% of the main agricultural products and produce more added value by 2020 (see Map 1).

Whereas FDI represents a substantial part of the country's total investment (73% in 2016), the Ivorian government, to support its local processing policy, is aiming for a participation of USD60 billion from private sector investments which would account for 62% of the total investment plan (National Development Plan (NDP)).

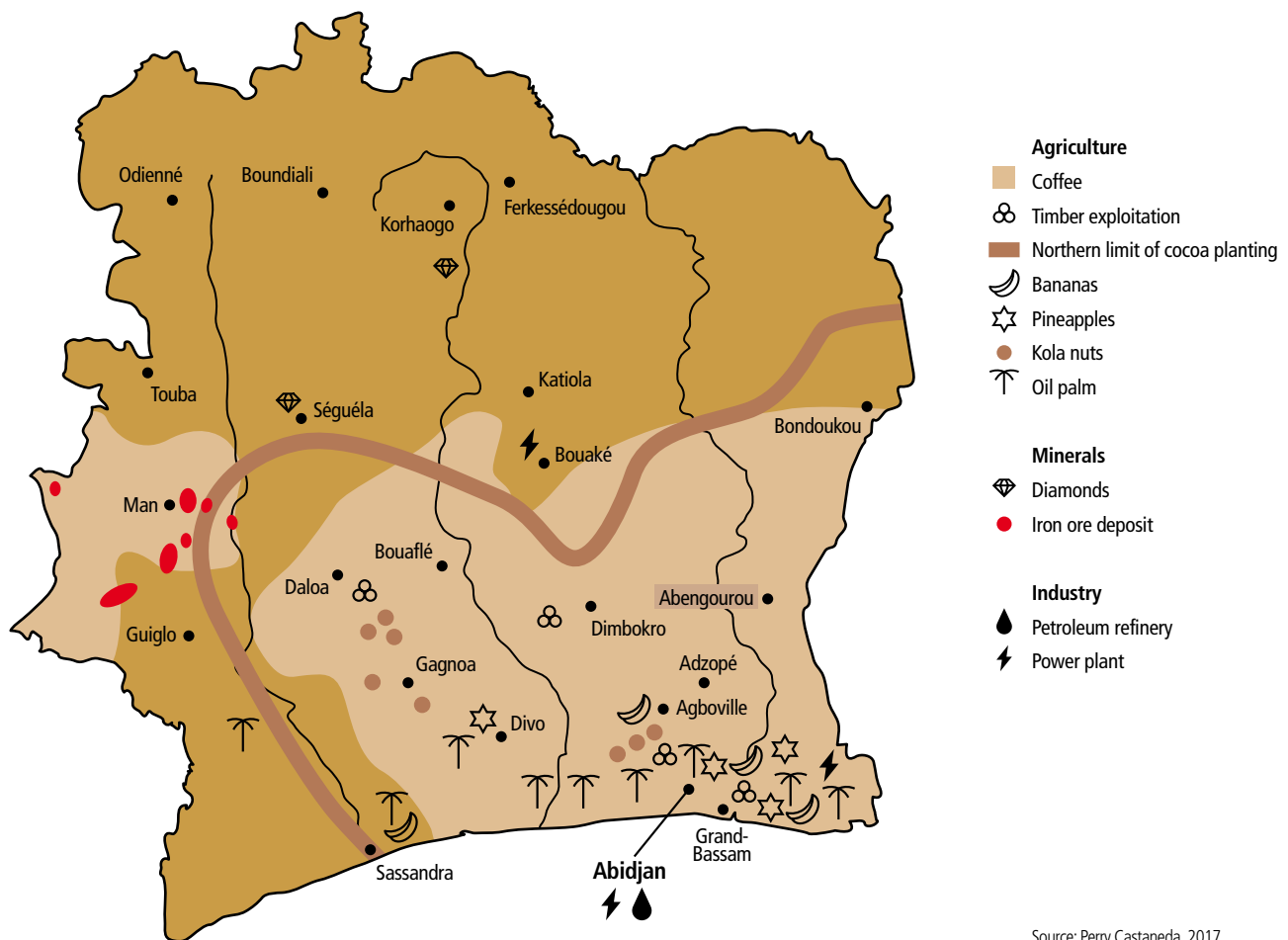
Côte d'Ivoire is a member of various regional communities, including the Economic Community of West African States (ECOWAS), the West African Economic and Monetary Union (WAEMU) and the Mano-River Union in which several institutions are framed to support regional trade integration and allow for international companies to take advantage of the whole regional market. A critical arrangement in this is the upcoming Economic Partnership Agreement (EPA) envisaged to liberalize at least 75% of the regional market. Some challenges still need to be addressed, however, such as regional harmonization of taxation and customs duties. Regional synchronization and recovery of Value Added Tax (VAT) also remain challenging. The provision of equity capital through an inclusive regional stock market is expected to address problematic low bank-debt

provisions. Regional electricity grid interconnection and other infrastructural developments are also being undertaken to attract more investors.

Interviews with high-level public and private sector representatives conducted in the context of this study have revealed that Abidjan is a reference point in terms of investment attraction that concentrates almost three-quarters of the total investment inflows into Côte d'Ivoire. Growing investments (0.3% up in 2016) have generated a 2% increase in employment, for which the investment promotion agencies deserve the credit.

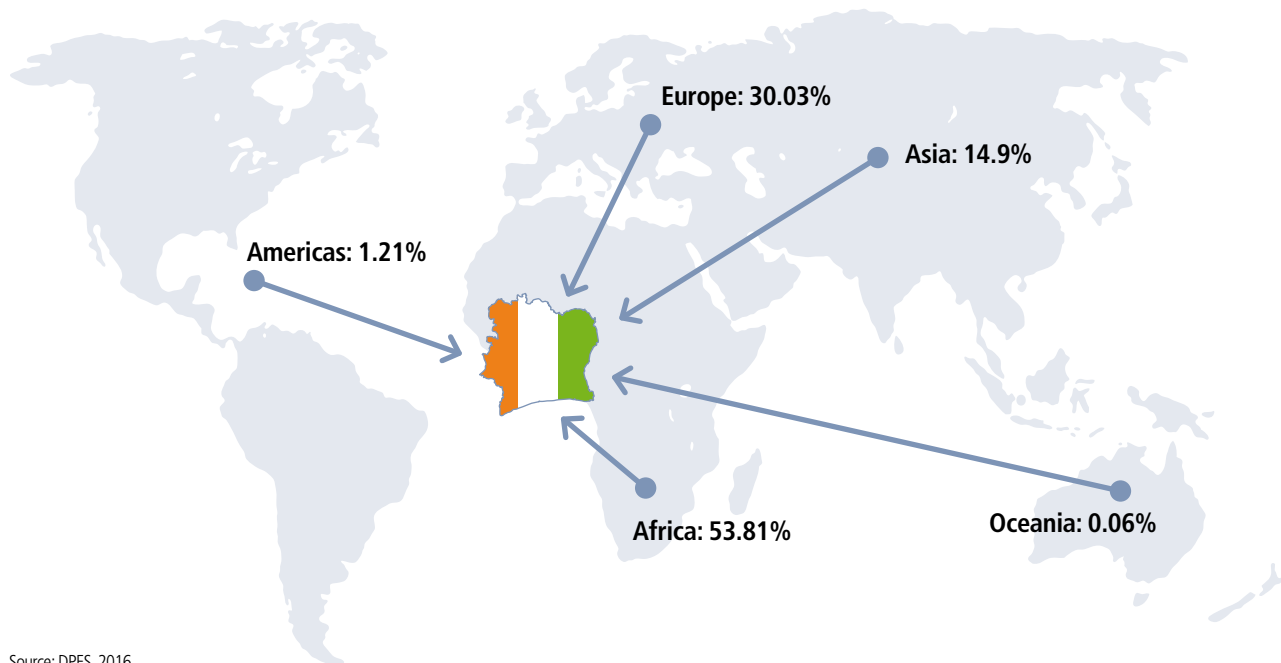
Interviews also revealed that there are tremendous further investment opportunities in Côte d'Ivoire, notably in the oil, gas and electricity sectors. But, there are still some considerable challenges in the administrative procedures (licenses, permits etc.), legal business matters, tax harassment, unfair competition,

Map 1. Agricultural economic activity in Côte d'Ivoire



Source: Perry Castaneda, 2017

Map 2. Côte d'Ivoire inward investment flows by major region of origin, 2016



Source: DPES, 2016

market monopolies, corruption, lack of transparency in governance processes, lack of local companies' inclusiveness and shortfalls in investment promotion activities. Nevertheless, the overall appraisal of the conduciveness of the investment climate in Côte d'Ivoire was considered positive by those interviewed.

Overall, FDI was assessed by interviewees as generating more employment, increasing social welfare and promoting environmental protection. However, some interviewees highlighted the need to boost more partnerships between foreign and local business players to promote transfer of competences and technical know-how to local companies. Also, the current investment inflows are geographically concentrated and over-focused on Abidjan at the expense of other areas of Côte d'Ivoire.

The representatives of foreign companies that were interviewed, especially those in the energy sector, claimed to enjoy excellent relationships with the government and to benefit to some extent from the government's additional funding. However, many cited slow and problematic VAT recovery, which could be a source of reinvestment funds if well monitored and better streamlined. Further, they cited that better management of public tenders is needed to stimulate

fair and equitable opportunities for FDIs. This of course should be supported by more appropriate provision of statistical data.

Local businesses said they have very few relations with FDI companies and hope to interact more in the future (see Map 2). Investment promotion agencies said that they need to further increase and diversify their promotional activities by, for instance, establishing a platform for FDI providers and the local business community to set up partnerships.

The Ivorian context

Political and economic transformation

Côte d'Ivoire went through a political crisis from 2000 to 2011. One of the major causes was unequal domestic distribution of wealth. Since then, security matters have been of serious concern. Besides various mutinies in February 2017 by the ex-rebel forces that were integrated into the army, there is also a structural and growing insecurity phenomenon in Abidjan. Although, conditions seem to have improved significantly in recent years, the political situation remains fragile. A new phenomenon, "Microbes", ex-child soldiers who have not been reintegrated, has

Due to its dependency on the export of cocoa cash crops, the drop of 25% in world cocoa prices in 2016 adversely affected the current account balance of the country

resulted in serious instability. There is also a structural economic imbalance since Abidjan and its surrounding area concentrate almost 75% of the country's economic activity, leaving the northern region of the country relatively poor.

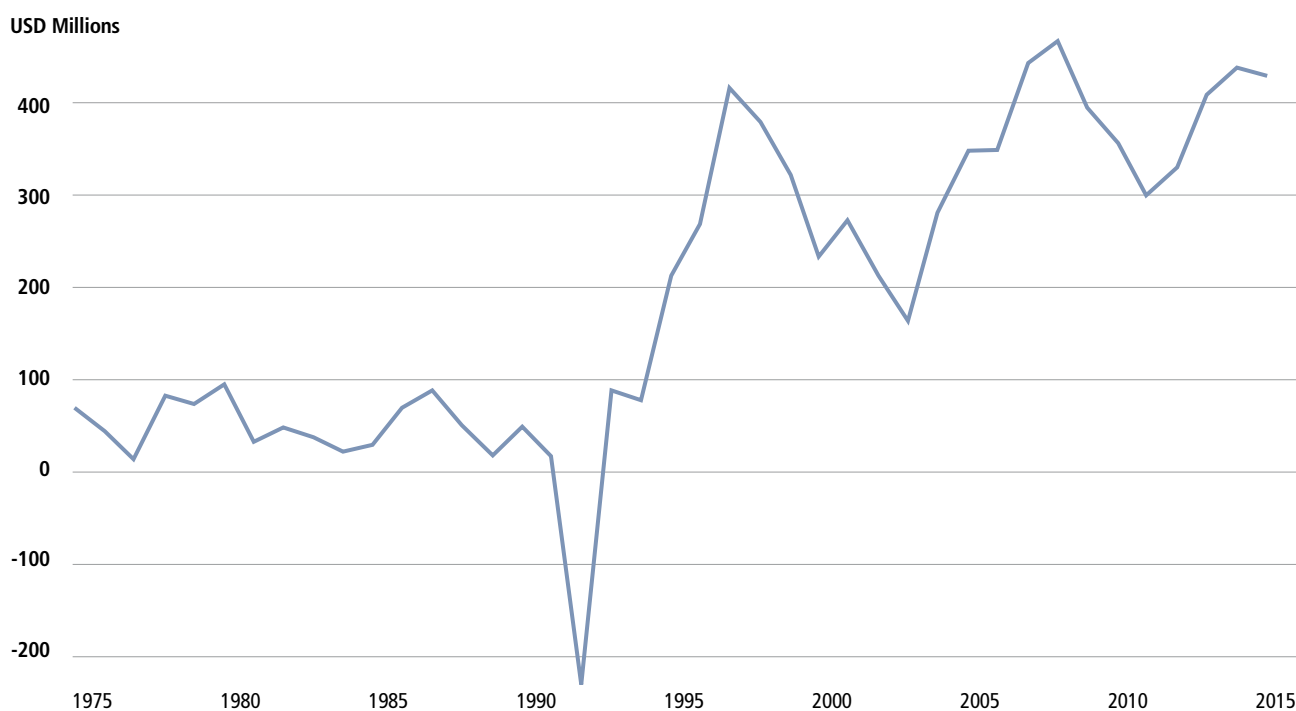
Due to its dependency on the export of cocoa cash crops, the drop of 25% in world cocoa prices in 2016 adversely affected the current account balance of the country. This, however, was somewhat compensated for by the progressive rise in FDI from 1.3% to 2.9% in 2016. These recent global market price incidents have again strengthened the intention of the Government of Côte d'Ivoire (GdI) to diversify its agricultural sector portfolio and promote local transformation that will

help to overcome the risks associated with its current relatively mono-culture agro-business.

However, Abidjan's industrial zones may not be able to accommodate the extensive industrial transformation (50% increase in total production) envisaged by the GdI due both to limited space and congestion in its maritime port. Some interviews with government officials suggested that surrounding towns such as Attinguié, Dabou, and Anyama could address these upcoming needs by accommodating new FDI in their industries and additional dry ports.

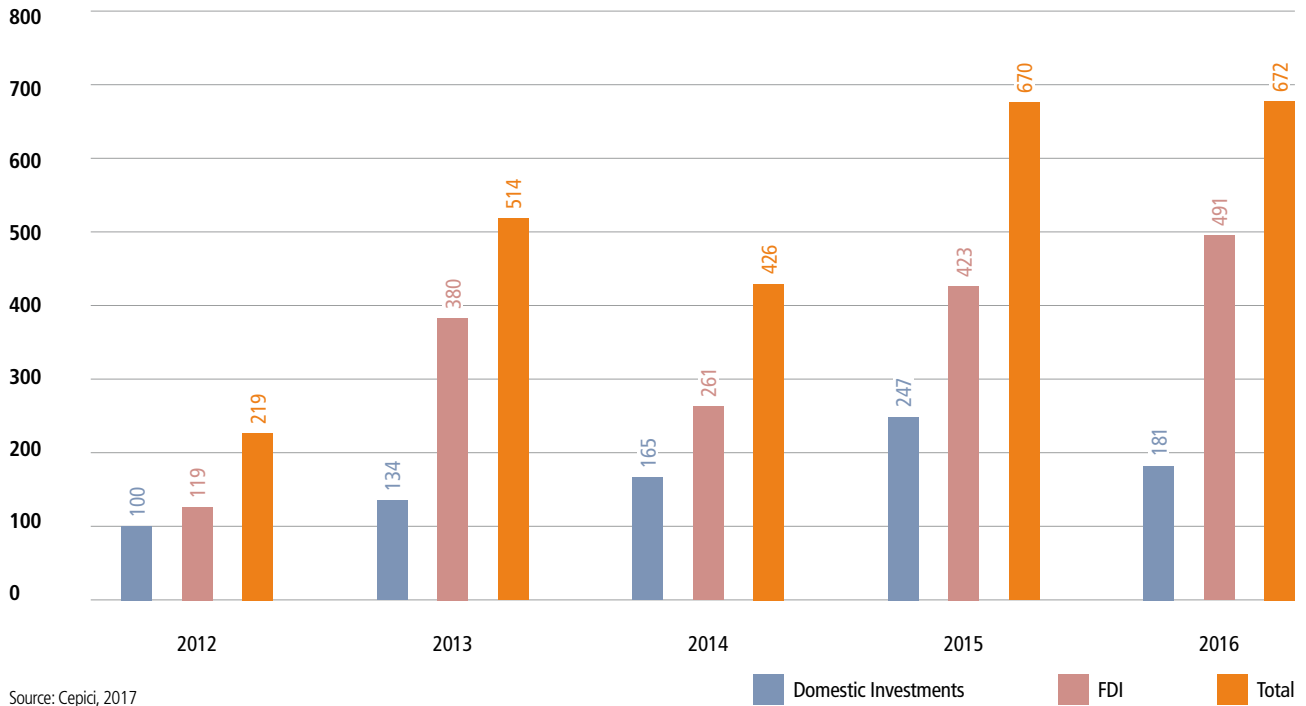
Some respondents mentioned that shortfalls in the available labour skills in Abidjan had been key to their investment decisions. In response, the national university programmes in Abidjan were upgraded, coupled with training programmes for young graduates sponsored by both the public and private sector. One respondent in Abidjan stated that since these initiatives had been undertaken, the level of qualified workers had improved. The next challenge would be to implement similar programmes in other parts of Côte d'Ivoire.

Figure 1. Growth of FDI in Côte d'Ivoire



Source: World Bank, 2016

Figure 2. Foreign and domestic investments into Abidjan, 2012-2016, USD millions



Abidjan's port infrastructure contributes to good connectivity with other Western African states but it would benefit from digitalization to ease congestion

© Leon Viti

Investment climate

Côte d’Ivoire is conducive to FDI attraction (see Figure 1). It is possible to establish a company in one single day through the Centre of Investments Promotions (CEPICI), an institute dedicated to attracting and assisting foreign investors. CEPICI figures indicate that the FDI inflow from other African countries into Côte d’Ivoire is rising and the amount invested from Moroccan enterprises for instance has increased to 22% of the total investment, which even overtook the traditional critical French FDI flow (16%) in 2015.

Interviewees praised the investment protection institutions (i.e. Tribunal de Commerce and Guichet Unique) established by the government as these have boosted investors’ confidence.

The business directors interviewed confirmed that national domestic investments (Figure 2) are key in their risk strategy and that more effort by the GdI is required towards promoting local firms’ access to capital since such firms often lack the guarantees to access the necessary investment funds for partnerships with foreign companies. Respondents further stated that some of their foreign direct investments (Figure 2) would not have been possible without the participation of local partners. Notwithstanding the level of domestic investments, foreign investments persistently remained much stronger over the past half-decade and were typically two times larger or more, at USD181 million and USD491 million, respectively, in 2016 (see Figure 2).

The Ivorian investment code provides for several incentives to reduce investment costs through tax exemptions and rebates, exemptions on patents and licenses, or a reduction in contributions paid by employers for the retirement pension plans of local employees. In addition to promoting geographically more diverse investment, companies that locate in low-employment areas of Côte d’Ivoire will enjoy these incentives for a longer period than companies that locate in Abidjan.

Various other non-direct monetary incentives and guarantees to investors have made Côte d’Ivoire one of the more favourable investment places in Sub-Saharan Africa, including easy investment implementation procedures; fair and equal regulatory treatment for all FDI companies; financial and technical assistance in case of natural disasters that affect the companies’ return on investments and business plans; strong protection of intellectual property rights and private property; unrestricted imports of banned raw materials; easy access to work permits for expatriates and unhindered

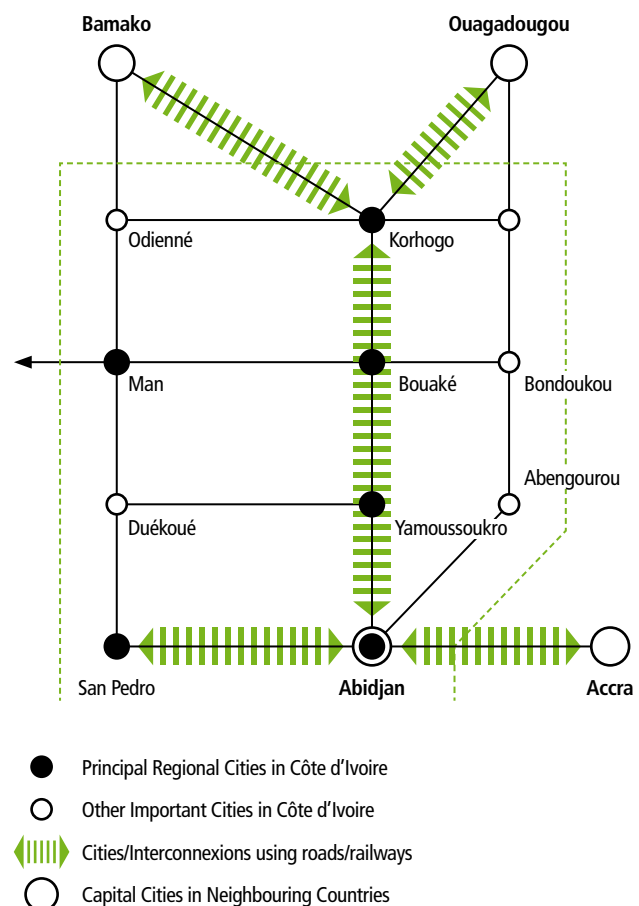
appointments of foreign CEOs; easy access to industrial zones; fair settlement of disputes; and unrestricted repatriation of company profits and expatriates’ salaries. In the case of the latter, parity between the Euro and the CFA Franc (FCFA) is a considerable asset for FDI, as is the efficient banking system with the presence of major international banking institutions. Most respondents confirmed the ease of undertaking all their financial transactions from Abidjan.

The Abidjan context

Locational advantages

Practically all interviewees confirmed that Abidjan is the place to be in Western Africa. Côte d’Ivoire is at the centre of both the Trans-Sahelian and West-

Figure 3. Network linkages between Abidjan and selected capital cities



Source: Jica, Greater Abidjan

African coastal highways. The Ivorian port and railway infrastructure contributes to good connectivity with the entire Western African region, Sub-Saharan Africa and, indeed, the world (see Figure 3).

Several countries, notably the land-locked nations in the hinterland (Burkina Faso, Mali, Niger, Guinea Conakry), are heavily dependent on such infrastructure. Regional managers mentioned the convenience of Abidjan when designing and implementing a marketing strategy reaching out to other Western African capitals. They recommended that further collaboration between the private sector and the Government of Côte d'Ivoire (at all levels) is needed to realize the full advantages and benefits of Abidjan's competitive edge, including upgrading of the port terminals and railway facilities, to increase the inward and outward flows of goods for the entire Western Africa region.

Côte d'Ivoire absorbs a high share of migrants in the region. Although this generally boosts the economy, it also has a reverse side by exposing the country to political instability in neighbouring countries such as Mali and Nigeria. Boko Haram, for example, killed 22 people in March 2016 on a beach in Grand Bassam near Abidjan that brought down investor confidence. Some three-quarters of the managers of foreign companies stated that political instability is one of the most challenging variables while making their long-term investment and production plans.

Economic functions

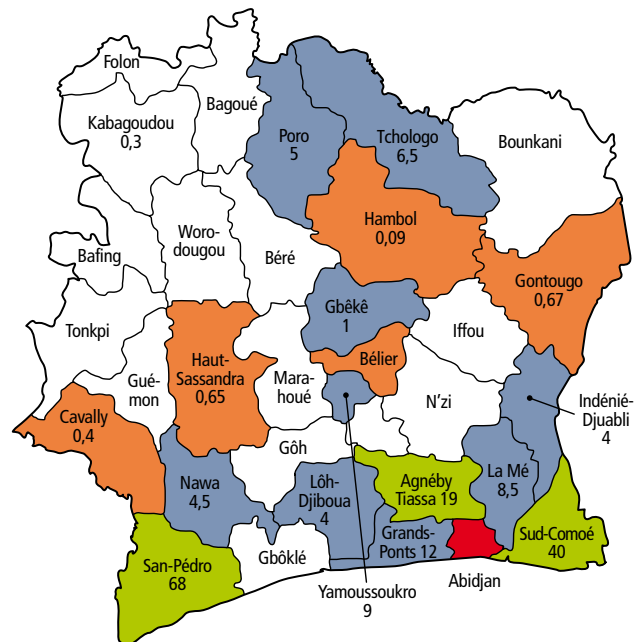
Abidjan is the economic capital of Côte d'Ivoire. Due to its maritime port, Port Autonome Abidjan (PAA) and road and railway infrastructure, it is a critical transit hub that ensures the infrastructural linkages with and between nations in Western Africa.

Most of the commodities produced in the region's major cities transit via Abidjan. For instance, mangoes produced in Odiénné and Korogho are transported to the PAA for international destinations, while all mining products from the North-West region of Côte d'Ivoire also reach their export destination via the PAA minerals terminal.

Abidjan and FDI

Abidjan is where the vast majority of the inward FDI into Côte d'Ivoire is concentrated. Most respondents stated that Abidjan's road and port infrastructure weighed heavily in foreign investors' choice of locality, as do the good ICT connectivity, the reliable 24-hour electricity

Figure 4. Côte d'Ivoire geographical scope of Investment



- No Contracted Investment
- Investment Below XOF 1 Billion
- Investment Between XOF 1 To 10 Billion
- Investment Between XOF 10 To 100 Billion
- Investment Above XOF 100 Billion

Source: Cepici, 2017

Côte d'Ivoire absorbs a high share of migrants in the region. Although this generally boosts the economy, it also has a negative effect by exposing the country to political instability in neighbouring countries such as Mali and Nigeria

supply and proximity to government institutions. A minority attributed their choice for locating in Abidjan to the local markets for their goods or services. As a matter of fact, one respondent stated that the majority of its clients are in Abidjan. More respondents emphasized Abidjan's locational advantage as a regional entry point for a range of sub-Saharan countries and their capitals that host these companies' sub-offices.

But the currently very high concentration of FDI in Abidjan is neither durable nor desirable. The impacts of such negative externalities as road congestion

Table 1.
Maritime traffic in the port of Abidjan

Details	2013	2014	2015	Compo 2015 %	Var. % 14 /15
Petroleum products	7,740,337	6,986,446	7,582,537	34.36	8.5
Inclusive of crude oil offshore	1,115,269	900,638	1,260,546	-	40.0
General goods	13,097,305	13,162,060	13,603,021	62.0	3.4
Inclusive of fish products	638,923	664,446	740,688	3.4	11.5
Total maritime traffic	21,476,565	20,812,952	21,926,247	100.0	5.3

Source: PAA website

Table 2.
Increased volume of investments and employment creation

Indicators	Jan-Dec 2015	Jan-Dec 2015	Change (%)
Number of approved companies	186	225	21
Volume of investments	670	672	0.3
Number of jobs generated	6,533	6,647	2

Source: Cepici, 2017

and shortage of adequate space for large companies' expansion are already clearly felt (see Table 2).

Access to an adequate supply of conveniently located land for industrial expansion is complex. During the interviews, respondents stated that the acquisition of land is problematic and is subject to lengthy administrative processes and often prone to corrupt procedures. Since land acquisition is typically the first step in greenfield FDI, a critical review of current land transactions should be a priority for the city's policymakers. To overcome the shortage of adequate industrial land, a new industrial zone with all the necessary infrastructure at PK24 Attinguié has been put in place to assure that new and additional inward FDI can be made efficiently.

Geographical scope of investments

Electricity and water supply for industries are quite stable in Abidjan, but the countryside experiences a notable scarcity in both services. In the wake of shortfalls in the implementation of the GdI's stated decentralization policy and unfulfilled guarantees to those who invested in the new industrial zones, foreign investors were forced into high-capital expenditure for generators and water-supply systems.

Though the new Ivorian industrial zones seemed attractive to FDI in terms of both space and services to be provided, further enthusiasm among foreign investors will rapidly decline if current electricity and water supply problems are not addressed in an adequate manner.

Out of a total of USD672 billion of investments registered in 2016, Abidjan captured USD491 billion, accounting for 73%. Foreign respondent companies operating in manufacturing, transport and logistics said they were keen to expand their facilities in the other areas of Côte d'Ivoire. Strategic towns such as Attinguié, Ferké and Odiénné were mentioned as locations for such expansion plans, provided the promised services and utility provision are realised.

From Abidjan's sea port, goods are distributed by air, road or rail. Road transportation constitutes the principal means. Indeed, most interviewees acknowledged that they rely more on roads and highways than rail due to the poor railway network for Abidjan–Bouaké–Frekessédougou–Bobodioulasso–Ouagadougou that lacks interconnections in all cities it serves. As with the findings in the Johannesburg case study (Kollamparambil and Jogee, 2017), road-based logistics may not be sustainable because roads deteriorate quickly and often create delays.

Although all interviewees praised Abidjan's port infrastructural facilities in comparison with other ports in the sub-region, at the same time they were also concerned about the recurrent congestion (see Table 1). The steadily growing national economy has seen a significant increase in port volumes, but some trucks remain up to one month in port awaiting clearance. Port authorities claim that a lack of digitalization in clearance procedures constitutes a severe impediment to greater efficiency.

Map 3. Economic regions of Western Africa (2017)



Source: www.ecowas.int

Table 3.
Côte d'Ivoire's major trading partners (2015)

Imports			Exports			Total Trade		
Partner	Value (€)	% World	Partner	Value (€)	% World	Partner	Value (€)	% World
World	10,790	100.0	World	9,877	100.0	World	20,667	100.0
1. EU 28	2,941	27.3	1. EU 28	3,351	33.9	1. EU 28	6,292	30.4
2. Nigeria	2,351	21.8	2. USA	844	8.5	2. Nigeria	2,900	14.0
3. China	1,545	14.3	3. Nigeria	549	5.6	3. China	1,663	8.0
4. Bahamas	537	5.0	4. Burkina Faso	543	5.5	4. USA	1,106	5.4
5. India	381	3.5	5. India	467	4.7	5. India	848	4.1
6. USA	262	2.4	6. Ghana	434	4.4	6. Burkina Faso	558	2.7
7. Thailand	239	2.2	7. Switzerland	409	4.1	7. Bahamas	546	2.6
8. Morocco	172	1.6	8. Mali	348	3.5	8. Ghana	498	2.4
9. Vietnam	156	1.4	9. Turkey	225	2.3	9. Switzerland	455	2.2
10. Mauritania	135	1.3	10. Canada	216	2.2	10. Mali	354	1.7

Source: IMF



Respondents believe that upgrading the railways in Côte d'Ivoire will increase the flow of goods for the entire Western African region

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Further, interviewees in the manufacturing sector recognized that measures related to the enlargement of the Vridi Canal and construction of a second container terminal would boost the inflow of required raw materials for their industry and increase their productivity.

Governmental investment promotion activities

The increase in FDI inflow can also be credited to the effectiveness of promotion strategies. One respondent mentioned that it was difficult to do business in Côte d'Ivoire without proper insight into the Ivorian business ecosystem.

Investment promotion agencies (IPAs) were interviewed to analyze their investor targeting strategies. The attraction of Chinese FDI into Côte d'Ivoire is partly the result of IPA strategies and the mission and economic forums they organize to attract Chinese investors. The investment promotion agencies were all optimistic about future FDI, since "all the signals are green". For them, the steady economic growth, the current optimal business climate, as well as political stability and peace are all undeniable investment-attracting factors in the short and long-term.

Tremendous opportunities in oil, gas and electricity

The Ivorian oil, gas and energy sectors did well in terms of investment attracted during the period

2003-2013 (Mahdi, Nakeeb and Barakat, 2017). The representatives of IPAs were all very positive about the opportunities that exist in the Ivorian market. The ambition of Côte d'Ivoire is to increase its production of crude petroleum and natural gas to 200,000 boe/day (barrel of oil equivalent) by 2020. It is therefore not surprising that FDI in these sectors is strong, particularly in Abidjan where most related administrative operations take place. The electricity sector likewise intends to significantly increase its output through FDI.

A majority of the foreign companies interviewed were also confident with respect to further FDI flows into Abidjan, in particular since the growing economy implies middle classes with increasing purchasing power for higher quality products and services. A substantial number of firms attributed their optimism not only to the growing domestic markets of Western African nations but also to the rising number of competent local partners in Abidjan, as well as the numerous infrastructure initiatives being undertaken by the government. All these were perceived as increasing international trade and allowing for opportunities in enhanced financial services in Abidjan, in agroindustry and in education. Nevertheless, all companies stressed that political stability and fragile peace remain the key determinants for their investment decisions and that the security level needs to be enhanced.

Persistent challenges

In terms of challenges, most foreign investors interviewed mentioned the bureaucratic administrative procedures and the corruption often associated with that. Others said precarious, volatile and non-inclusive business legislation was a hindrance. Some firms were found to be subject to bans on importation of some goods while domestic provision of the same was scarce and expensive.

The continuing influence of the idealistic but monopolistic historical legacy of the 1960s is a challenge in some sectors and is likely to deter new FDI while reducing the beneficial potential that current investments have to offer. This is often the case with public utilities like electricity and water supply. Respondents further saw the heavy tax burden and unfair competition as significant obstacles. Transparency in public office was also referred to as a clear challenge. Nevertheless, companies remain very optimistic, as current impediments are neither overriding nor unmanageable and could be addressed through improved policy. For instance, it is a good sign that Côte d'Ivoire has joined the Open Governance Partnership initiative, a multilateral organization which aims to promote transparency, fight corruption, and stimulate unrestricted access to public data and statistics.

But it is not just the government that should act. IPAs' current lack of coherence and coordination of various government initiatives and their actual investment promotion activities could benefit from serious review and transformation. Business managers further argued that the IPAs' current difficulties in attracting new and additional investments can be addressed by both increasing and diversifying their promotion activities.

At the regional level, the Ivorian Ministry of Transport reflected on the fact that, even though regional initiatives are established to address some of the challenges, it is still not easy to adapt them to contingencies and current circumstances. There is a need for improved coordination amongst the State members of the region.

Socio-economic impacts of FDI

Foreign firms stated that they were active employers who take gender into account. Local parties, however, believe that foreign companies could employ more local people rather than relying on human resources

It is a good sign that Côte d'Ivoire has joined the Open Governance Partnership initiative, a multilateral organization which aims to promote transparency, fight corruption, and stimulate unrestricted access to public data and statistics

from abroad. They argued that the transfer of technical skills, know-how and competences depends on more intensive local involvement in and exposure to foreign companies' daily operations. Officials in the Ministry of Transport stressed that employment is affected by the current concentration of FDI in Abidjan that is not beneficial for employment growth in other regions of Côte d'Ivoire. In such disadvantaged areas, youth in particular would benefit from more geographically dispersed FDI.

Most foreign firms mentioned were aware of the need for environmental protection, with 75% claiming 'proper environmental policies' in their companies including for the treatment of wastewater and waste recycling. But they admitted that it is not easy to implement environmental protection measures when infrastructure is inadequate.

Government, foreign and local companies' relations

In general, foreign firms claim to have good relationships with the GdI. However, some respondents feel they are victims of tax harassment and inefficiencies in their VAT recovery. Companies in the energy sector believe that the government's perception that big revenues are being generated often constitutes a reason for harassment in terms of tax collection or a reduction in promised incentives.

A substantial number of foreign firms are involved in public offers and tenders. Whereas the GdI has established the *Direction des Marchés Publics* (DMP) and *Autorité Nationale de Régulation des Marchés Publics* (NRMP) to regulate tenders, foreign firms stressed the need for better communication in matters of public marketing and tendering procedures. Companies would also like the government to facilitate procedures for customs clearance, permits, licenses and government certificates.

Apart from the sometimes fierce competition between foreign and local companies, relationships

are generally good. Some local companies, however, would prefer foreign companies to not be so isolated in their clusters and to open up to the local business community. The IPAs are working hard to create more interaction between foreign investors and potential local business partners, but the results so far leave room for improvement, in part because public policies remain very conservative in terms of business matchmaking and joint-ventures.

Regional context

Several organizations have been established in Western Africa to support regional development objectives. FDI attraction is a key matter for the West African Economic and Monetary Union (WAEMU). WAEMU has established a common accounting system and periodically reviews member countries' macroeconomic policies to promote convergence. It has also established a regional stock exchange, as well as the legal and regulatory framework for a regional banking system and is promoting regional stability, peace and, economic openness.

The WAEMU state members Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo, for historic reasons, all share the same currency (FCFA) conveniently at parity with the Euro (€1 = XOF 655.957). With a tangible portion of investment received from Europe (43% of the total received FDI during 2006-2011), the WAEMU plays a major catalytic role in FDI attraction to the region (see Table 3). Also situated along the Abidjan-Lagos Corridor but having separate Ghanaian and Nigerian currencies (Cedi and Naira), Accra and Lagos are somewhat restricted from fluent exchanges with WAEMU countries in the FCFA zone.

The Abidjan-Lagos Corridor

The Abidjan-Lagos Corridor consists of five adjacent countries along the Gulf of Guinea: Côte d'Ivoire, Ghana, Benin, Togo and Nigeria. These countries are engaged in the corridor through a regional programme facilitating road transport and transit among ECOWAS and WAEMU countries. Together with regional cooperation institutions and provisions, the



The Ivorian government has launched a campaign to clean up Abidjan and make it more attractive to investment

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Although part of the Abidjan-Lagos Corridor, Accra has its own currency and is restricted from fluent exchanges with cities in the FCFA zone

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programme improves the transport dynamics within the corridor and facilitates intra-regional trade and competitive industries. Nevertheless, most Abidjan-based respondents operating across the region stated that the benefits of location along the corridor could significantly increase if Côte d'Ivoire would address the Abidjan port's long administrative procedures and synchronise its customs procedures.

As shown in Table 3, after the EU, Nigeria is the largest global trade partner of Côte d'Ivoire. Most goods exchanged between the two transit via the Abidjan-Lagos (AL) Corridor.

Regional tax and tariff harmonisation

Discussions are ongoing about the degree of protection provided for national economies in the region by the ECOWAS External Common Tariff (ECT) - the common tariff applied by the ECOWAS countries members on imports and exports - and the implications for the upcoming Economic Partnership Agreement (EPA). Although the latter will, trade wise, link Europe and the Western Africa region, it may also lead to unbalanced inflows of imported goods and generate fierce competition for FDI companies and domestic firms in the region.

Half of the corporate interviewees, particularly those in the manufacturing and agro/food sectors expressed concern about high customs tariffs within the Western Africa region. The region's governments need to review these trade-restricting tariffs and consider following the example of freely flowing capital equipment, raw materials and intermediate goods that prevails within the special economic zones (SEZs) in Egypt (Mahdi, Nakeeb and Barakat, 2017).

Harmonization of taxation policies is needed to ensure regional macroeconomic convergence. Some companies observed that, more often than not, the WAEMU community's tax exemptions are not adequately enforced in all WAEMU member states. Tax and tariff harmonization under the EPA is therefore a hot topic. At the same time, the anticipated heavy reduction in customs revenues raises questions about countries' budgetary sustainability. While most respondents expressed a desire for more incentives such as tax holidays or prevention of double taxation agreements, the government expects to reduce any adverse revenue impacts of the EPA by future increments in VAT collections over the larger, anticipated inflow of goods. Since the EPA implies strict harmonization of

To improve the skill levels of their respective labour pools, the Talent Mobility Program was initiated in 2016 to create a joint labour platform for Benin, Côte d'Ivoire, Ghana and Sierra Leone

VAT, this would lead to neutral economic taxation in the region and it is likely to discourage volatility in FDI movement from one country to another when trying to take advantage of taxation differences.

While a large number of companies interviewed put their initial reluctance to invest down to instability and lack of the rule of law and fairness in business matters, the *Organisation pour l'Harmonisation en Afrique du Droit des Affaires* (OHADA) has been established to address business conflicts and protect investors. CEOs mentioned, however, that its impact still remains limited due to incomplete provisions in its regulation.

Bank credits extended to the private sector are very low (19%) in Côte d'Ivoire if compared to the regional average of 22%. This particularly impedes the investment capacities of local players and, at times, it is difficult for them to find suitable investment partners.

Most countries that attracted FDI have a dynamic stock market. A more comprehensive approach that includes all ECOWAS stock exchanges could take regional market capitalization to USD84 billion with large transaction volumes that, in turn, would better allow for companies to raise capital locally. This would benefit foreign and local investors alike, besides raising government revenues through the 10% tax on each stock transaction.

Free movement of competent human resources

Efficiency demands good quality human resources. To improve the skill levels of their respective labour pools, the Talent Mobility Programme was initiated in 2016 to create a joint labour platform for Benin, Côte d'Ivoire, Ghana and Sierra Leone. The programme will facilitate the free movement of competencies across these countries' common borders and is likely to help address their nagging unemployment problems.

Findings and recommendations for the City of Abidjan

a) Abidjan can act as a catalytic hub to attract the (regional) headquarters of new investors in Côte

d'Ivoire. For this to materialize, more adequate transport links need to be established between Abidjan and its surrounding towns where industrial lands can be provided to accommodate incoming FDI for industrial activities.

- b) The structural congestion in Abidjan's port is an impediment to companies' production efficiency. Its clearing procedures should be digitalized as a matter of urgency. This requires joint efforts by the central government, customs, the port authorities and the private sector to put in place synchronized software and adequate hardware.
- c) The railway system in the city needs to be upgraded and rehabilitated to reduce congestion on roads and slow down their deterioration.
- d) Abidjan would gain by attracting high-level financial services companies to support FDI operations.
- e) Security in and around Abidjan needs to be enhanced since this has a direct impact on the attraction of investors.
- f) Investment promotion activities should be stepped up and should highlight the infrastructure and facilities that Abidjan has to offer. This can be done in various ways, such as through investment forums and promotional campaigns in other countries, as Abidjan has already done in China.
- g) Greater visibility of local companies is desirable and their promotion should present them as attractive partners in a range of activities and sectors.
- h) Though considerable efforts have already been made by the government, the availability of skilled labour should be increased. Education programmes in Abidjan should continue to tailor graduates' training to the skills required by foreign firms to increase their employability and to facilitate the transfer of technology, know-how and expertise.
- i) Government officials should put in place more rigorous and effective environmental infrastructure to ensure that both foreign and local companies' environmental behaviour matches the mid- and longer-term need to mitigate climate and environmental change.

Part C | City case studies

Foreign Direct Investment in Kigali City

By Frederick Golooba-Mutebi

Kigali is one of the fastest growing cities in Africa with an average annual population growth rate of 4 percent
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The Government of Rwanda has redeveloped the airport as part of a package of measures to mobilise FDI

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This research examines the Government of Rwanda's efforts to attract FDI, the impact of such investment and investors' experiences in the capital city Kigali. Although partly informed by secondary sources, the study is based primarily on interviews with representatives of firms across different sectors of the economy about the business environment and companies' experiences with government entities. Also interviewed were officials from the Rwanda Development Board to understand: a) the strategies Rwanda has adopted to attract FDI; b) the impact of investments on the city and the country; and c) the challenges to make Rwanda a preferred investment destination. The role of FDI in employment creation was raised in interviews with government officials and with both local and foreign investors.

Introduction

Since 2000, the Government of Rwanda (GoR) has pursued policies seeking to transform its traditionally agrarian subsistence economy into a knowledge-based one. These policies are laid out in the Vision 2020

framework for economic transformation. Vision 2020 seeks to transform Rwanda into a middle-income country by 2020. By then it should have achieved a per capita income of about USD900 (up from USD290 in 2000). The GoR is seeking to transform the structure of the national economy and make the industrial and services sectors dominant by 2020. The objective is to transform the GDP shares of services to 42%, industry to 26%, and agriculture to 33%.

Kigali, the capital city of Rwanda, is a focus within these ambitions, both as an investment destination in its own right, but also as the first port of call for foreign investors seeking to establish themselves elsewhere in the country. A disclaimer is in order, however. Given that Kigali is the first port of call for all investors, it is easy to conclude that investments coming into the country are Kigali-bound. In the absence of disaggregated data showing which investors remain in Kigali and which are going elsewhere, such a conclusion should be treated with caution. Separating the respective attractiveness of Kigali as a city and the attractiveness of Rwanda as a

country presented a challenge in this research due to a certain blurring of the boundaries between the two.

Overall, since the civil war and the 1994 genocide against the Tutsi, the Government of Rwanda (GoR) has come a long way in building a firm foundation for, arguably, the most ambitious development agenda in the Eastern African region based on the security of people and property and zero tolerance of corruption. Driving all this are leadership and commitment, as well as strong economic growth that averaged 8% annually between 2004 and 2008 and rose from 7.9% in 2007 to 11.2% in 2008.

The GoR, like its counterparts in South Africa, Côte d'Ivoire and Egypt (the other three case studies in this report), is keen to attract FDI to boost its economic growth strategy and reduce unemployment. To this end, it has introduced policies, as well as legal and institutional reforms, that are designed to realize its objectives. In 2008, the GoR set up the Rwanda Development Board (RDB) to facilitate the fast tracking of development. Among other initiatives, notwithstanding continuing challenges, the RDB works to make the business environment more attractive to investors. Other measures to facilitate FDI mobilization include the establishment of a national airline Rwanda Air; construction of a larger airport; modernization of the national roads network; establishment of industrial parks; investment in information and communications technology (ICT); and an increased electricity supply. Together, these measures seek to turn Rwanda into a preferred investment destination, especially in tourism, communications, transport logistics and services.

Consistent improvement in international rankings such as the World Bank's annual *Doing Business Report* over the last decade points to the successes achieved. After Mauritius, Rwanda is second in 'ease of doing business' in Sub-Saharan Africa. This is a key consideration for potential investors. The government's efforts to transform the economy and the country at large focus, in the first instance, on Kigali as the capital city and the country's investment hub.

A brief history of Kigali

Dr. Richard Kandt, the first German imperial resident governor of Rwanda, founded Kigali in 1906. Owing to its central position, Kigali developed into a major commercial centre and a transit point for traders from Bukoba and Kigoma (in Tanganyika, now Tanzania) via

Bujumbura in Burundi and also between Kisangani in the Democratic Republic of Congo and Kampala in Uganda. Kigali became a magnet for Arab and Indian textile, copper, bead and ivory traders who were hitherto based in Nyanza where the palace of King (Umwami) Yuhi V Musinga, who ruled Rwanda prior to German colonization, was located.

Early-day Kigali occupied two hills: Nyarugenge and Nyamirambo. Until World War I, Rwanda was a small colonial backwater with few links to the outside world. When the Belgians occupied Rwanda after World War I, they disliked the Kigali site and established another administrative residence in Nyanza, where the King lived. In 1921, however, the colonial administrative centre for Rwanda was moved back to Kigali.

Until World War I, Rwanda was a small colonial backwater with few links to the outside world. When the Belgians occupied Rwanda after World War I, they disliked the Kigali site and established another administrative residence in Nyanza, where the King lived

Over time, Kigali has grown in size and population. Nevertheless, at independence in 1962, it was still only a small village with primarily administrative functions. It had a population of 6,000 people and an urban area of approximately 3 km². By 1990, it covered an area of 112 km² and had a population of 140,000. The administrative reforms of 2000 extended Kigali's boundaries to 314 km² and those of 2005 to 730 km². According to the 2002 Census, Kigali had a population of 608,141 inhabitants, pointing to an average annual growth rate of 9% since 1991.

Contemporary Kigali

Kigali is one of Rwanda's five provinces. Administratively, it comprises three districts: Gasabo, Kicukiro and Nyarugenge. Each district is divided into sectors of which there are 35, each divided into cells - 161 in total. Each cell comprises villages

(imidugudu), of which there are 1,061. Kigali is one of the fastest growing cities in Africa with an average annual population growth rate of 4 percent. The physical and demographic expansion has resulted from rural-urban migration by employment and opportunity seekers. Gasabo is the most populated district, with the fastest population growth at 5.2% annually. Nyarugenge is the least populated, with an average population growth rate of 1.9%. The most densely populated areas are found around the city's core, with the highest density of 2,127 people per km² in the Nyarugenge district. The lowest population density is found in the Kicukiro district, at 1,918 people per km².

As a result of the physical expansion, land formerly under forests and agricultural exploitation has been developed for residential and business purposes. Contemporary Kigali is the product of the revision of its boundaries under the GoR's decentralisation policy that added some peri-urban areas previously outside the city through legislation. Law No 47/2000 of 19/12/2000 re-defined the city's administrative entities and law No 29/2005 of 31/12/2005 extended Kigali's boundaries to 730 km².

From 1994, Kigali also grew because of the influx of former refugees and exiles as well as a growing number of foreigners for work. In addition, natural population increase and administrative reforms have also extended Kigali's population. Politics and government policy have both been significant in this physical growth.

Under colonial rule, Kigali grew only slowly because the colonial administration discouraged urban growth. To this end, the authorities barred Africans, especially the unemployed, from settling in urban centres. After independence, governments continued to oppose urban growth, preferring to prioritise rural development. Moreover, urban areas provided few opportunities for employment. Both these factors kept rural-urban migration rates down. Unlike its predecessors, however, the current GoR believes in the transformative potential of urbanization and has made the growth of Kigali a cornerstone in its development vision. Consequently, Kigali is growing rapidly, as are other major urban centres in Rwanda because of the opportunities they offer to rural-urban migrants.

Impacts of rapid demographic expansion

Rapid population growth has proven a strain on infrastructure. Despite the government's

Table 1.
FDI in business activity

Business Activity	Number of Projects	Jobs Created	Capital Investment (USD in millions)
Business services	22	322	239.3
Sales, marketing and support	13	351	120.9
Manufacturing	9	2,713	420.4
Retail	8	732	55.8
Construction	3	1,416	950.3
Design, development and testing	3	237	26.1
Education and training	3	203	21.9
Logistics, distribution and transport	3	173	68.3
Headquarters	2	171	82
ICT and internet infrastructure	2	178	300
Other business activities	2	100	10.1
Total	70	6,596	2,295.10

Source: FDI Intelligence from the Financial Times Ltd.

commendable efforts, infrastructure upgrading has been slower than population growth. This presents national and city authorities with serious challenges, including escalating shortfalls in housing and related services. However, population growth also presents an important opportunity for investors in real estate development, since, in 2008, approximately 80 percent of Kigali's residents lived in unplanned settlements. The need for housing therefore provides investment opportunities for foreign and local investors alike, especially in low-cost and affordable housing. Real estate investment promises to become a key growth area and is already attracting local and foreign investors albeit not yet in sufficient numbers to respond adequately to the housing needs, notably among low-income earners in the formal and informal sectors.

Shortage of land and affordable housing are potential obstacles to sustainable urban planning. Currently, new housing is delivered through both the formal and informal sectors. The former works within existing regulations and norms and includes formal developers and the established construction industry. The latter mostly concerns spontaneous initiatives by individual households. Since 1994, the government has developed planned estates while private investors have catered mainly for middle- and high-income earners. Consequently, low-income groups have filled

the market gap and pursued their own initiatives in unplanned neighbourhoods. By 2007, when Kigali's population was about 800,000, the housing shortfall was estimated at between 8,500 and 10,000 units annually. Due to population growth, this has risen to about 35,000 units per annum. A recent study suggested that Kigali could face a housing deficit of up to 350,000 units in the next 10 years. This offers great opportunities for investment.

Investment in the city

Over the last 23 years, Kigali has become famous for Rwanda's near-miraculous recovery from genocide, and for being arguably one of Africa's cleanest cities. In just over 20 years, Kigali has evolved from a quiet, insular and dusty backwater to become one of the fastest growing cities in Africa. This can be seen partly in the emergence of new suburbs with accompanying service providers, and the increase in the number of businesses and related commercial activity in the city to which FDI has been a significant contributor (see Table 1).

Shortly after the genocide, Rwanda's then reputation for violence and political instability deterred foreign investors. Responsibility for kick-starting the investment drive fell on Rwanda's leading political party, the Rwandan Patriotic Front (RPF) and to a lesser extent the state. The RPF founded a holding company, Tristar Investments Ltd, with interests in food processing, real estate, engineering, construction and services. Over the years, Tristar Investments has grown into Rwanda's largest conglomerate, now called Crystal Ventures Ltd. Alongside Crystal Ventures is another major local investor, The Horizon Group, owned by the Rwanda Defence Force, which has interests in agriculture and agricultural value-addition, manufacturing (chemicals), engineering, logistics, real estate and construction. Given their connections to the state and the ruling elite, they are considered controversial by some and have been the subject of negative media reporting. However, they have made important contributions to the overall private sector development in the country, to employment creation, and to the exchequer's revenue mobilisation. Other local investment flagships include hotels, of which there has been an explosion in numbers, housing estates mainly for the well-to-do segments of society, and office buildings that have transformed the city's skyline.

Table 2.
FDI by sector

Sector	Number of Projects	Jobs Created	Capital Investment (USD in millions)
Financial services	19	513	242.7
Communications	6	411	356.1
Business services	5	99	41.8
Food and tobacco	5	670	46.4
Real estate	4	1,416	999.5
Automotive components	3	210	25.9
Healthcare	3	77	11
Hotels and tourism	3	64	16.8
Software and IT services	3	248	26.7
Transportation	3	30	45.9
Other sectors	16	2,858	482.3
Total	70	6,596	2,295.1

Source: fDi intelligence from the Financial Times Ltd

In recent years, the number of foreign investors has increased, starting in telecommunications, with the earliest arrivals led by South Africa's Mobile Telecommunications Network (MTN) in the late 1990s and then Airtel-Bharti, TIGO and eventually Korea Telecom. MTN came in as a co-investor with Tristar Investments Ltd, the predecessor of Crystal Ventures Ltd, and the government of Rwanda, while Korea Telecom came in as a government partner. Other large foreign investors include cement producer CIMERWA whose majority owner is a South African company; sugar producer Madhvani from Uganda; and international hotel chains including Marriott, Serena, Hyatt and Sheraton, with the latter's property still under construction (see Table 2).

There are only a few local investors in manufacturing and value-addition because many members of the local business community are steeped in commerce and trading, the two most dominant activities of the pre-genocide period. Manufacturing and value-addition are considered 'unknown territory' and too risky. With few exceptions, and not unlike in the other case study countries in this report, the manufacturing giants are foreign-owned companies, some of which have been in the country for several decades. They operate in food processing (Minimex, Azam, Azania), textiles (UTEXRWA), garments and fashion accessories (C&H & Kate Spade); beverages (Bralirwa and Skol), spirits (1000 Hills), and soap and cosmetics (SULPHO Rwanda Industries). Local



The activism of Rwandan President Paul Kagame has been an important factor in attracting investors

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Rwanda and Kigali are attractive because, besides good policies and the proactive courting of investors, they provide a gateway to a potentially large market in the east of the Democratic Republic of Congo, which is too far from the DRC capital Kinshasa for it to be serviced from there

representation is found in, to name a few, garments (Gahaya Links), detergents (Trust Industries), paints (Ameki Color) and steel (Tolirwa). Although local banks including the partly state-owned Bank of Kigali dominate the banking sector, there are notable foreign banks, such as the Kenyan Equity Bank, Kenya Commercial Bank, the Nigerian GT Bank and Uganda's Crane Bank.

Rwanda and Kigali are attractive because, besides good policies and pro-active courting of investors, they provide a gateway to a potentially large market in the east of the Democratic Republic of Congo which is too far from the DRC capital Kinshasa for it to be serviced from there. Indeed, many investors setting up in Kigali do so with a keen eye on the eastern DRC market for goods and services. Rwanda not only provides easy transit routes to the DRC but also to Burundi, Tanzania and Uganda. Investing in Kigali therefore makes sense for companies seeking to locate themselves strategically close to those markets.

Context

Having inherited a collapsed state and an economy in tatters, the current government, since it took power, has pursued an ambitious development agenda. At

the core of this is the determination to re-orient Rwanda from its history of violence and turn it into a prosperous country. Some commentators characterize this as ‘remaking’ or ‘re-imagining’ Rwanda. Poverty played a key role in the genocide and has been an important factor in the cycles of political violence that have bedevilled the Rwandan post-colonial history. Delivering prosperity will therefore be an important tool in any efforts to stabilize the country in the longer term.

The vehicle for the transformation is Vision 2020, Rwanda’s development roadmap. The broad thrust of Vision 2020 is to convert Rwanda into a middle-income country by 2020. The key indicators of this will be increasing the per capita income to USD1,240, a national poverty rate below 20 percent, and life expectancy increasing from 49 years in 2000 to 66 years by 2020.

Vision 2020 is being implemented alongside other medium-term strategies such as the Economic Development and Poverty Reduction Strategy (EDPRS), now in its second phase (EDPRS II- 2012-2018). Vision 2020 seeks to make the economy more private-sector led with the private sector a ‘catalyst’ for economic transformation. This helps contextualize the government’s efforts to develop a private sector through foreign and local investment. The EDPRS conceives the private sector as an engine for economic growth and places strategic emphasis on ensuring it will constitute the ‘dominant share of investment.’ The government has been pursuing and continues to pursue its ambitions alongside institutional, legal, and policy reform to boost private sector development and investment.

Policy and institutional reforms

The Rwanda Development Board

The Rwanda Development Board (RDB) was established by Law No 53/2008 of September 2008 as a specialized entity responsible for fast tracking development activities. It also has other responsibilities: facilitating the government and the private sector in general, and promoting local and foreign direct investment. In terms of attracting investment, the RDB has an investment promotion department with marketing and facilitation sections. The marketing section prepares information relating to opportunities in different sectors of the economy and presents it to investors. The information includes available

infrastructure, expected return on investment and any other information that investors would find useful in deciding whether to invest in the country. The information is presented in international arenas including conferences and workshops with potential investors in attendance and is also supplied to Rwandan embassy officials abroad to use for the same purposes.

The responsibility of the facilitation section is providing assistance to investors and helping them overcome administrative and other obstacles to move quickly towards actual investment. Although these processes tend to work better in Rwanda than elsewhere in the region where government organs are still heavily bureaucratic, the RDB still faces challenges in its role as facilitator, a point emphasized by investors.

Another of the RDB’s departments concerns ‘after-care’ and looks after investors facing challenges as they operationalize their businesses. Where the challenges are administrative, investors are directed to the relevant government agencies for quick resolution. Toll free telephone numbers are available to contact the RDB.

This tends to work well. However, sometimes there are policy-related challenges that cannot be resolved quickly. There is not always much the RDB can do in such circumstances other than taking on a policy advocacy role on behalf of the investors. This may or may not resolve the issue, such as, for instance, those related to land allocation by local authorities. In the past, specific challenges concerned the availability and price of electricity. Here the RDB worked on solving problems sustainably. Success is also dependent on coordination with other agencies: the Rwanda Revenue Authority (RRA), the Rwanda Utilities Regulations Agency (RURA), the Rwanda Environment Management Authority (REMA), and the Directorate of Immigration and Emigration, which also play key roles.

The Investment Code

The Investment Code is a key legal framework for engagement with investors. In May 2015, the GoR launched a new code seeking to attract more FDI, especially into the key strategic sectors: tourism, energy and new technologies. This new code amended the old one by targeting greater investment promotion and facilitation. Today, foreign investors do not have to invest the potentially prohibitive minimum of USD100,000. The new code is in line with

Table 3.
Annual FDI trends in Kigali

Year	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Projects	1	5	8	8	2	10	3	11	6	8	7	1

Source: fDi intelligence from the Financial Times Ltd

the government's Vision 2020, whose key objectives include further enhancement of the business climate. It is unclear what changes this particular reform has led to in Rwanda generally. However, in Kigali it seems not a great deal (see Table 3), although it is probably still early days.

Guarantees and incentives for investors

According to Chapter II of the Investment Code, notably Article 3 on "openness to investment," all sectors of business are open to private investors "regardless of the origin of the investor". The code encourages investment in the following priority areas: exports, manufacturing, energy, transport, information and communication technologies, financial services and construction of low-cost and affordable housing.

There are some clear advances in terms of investor response to this prioritization. For example, the financial services sector accounted for more than one-quarter of new projects during the period 2003 to 2017. Real estate development has also done well. It generated USD999.50 million worth of investments and 1,416 jobs. Construction has both the highest total and highest average investment at USD950.30 million overall and USD316.80 million per project on average. Manufacturing has generated the highest number of total jobs.

Investors who meet certain conditions are entitled to the following incentives: a) zero percent corporate income tax; b) 15% corporate tax; c) a corporate income tax holiday of up to five years; d) a corporate income tax holiday of up to seven years; e) exemption from capital gains tax; f) value-added tax refund; g) accelerated equipment depreciation for tax purposes; and h) immigration incentives for an investor and his/her dependents that include, among others, a residence permit subject to other relevant laws. These types of measures have been implemented over the past 15 years to improve the business environment and attract foreign investors. Their effectiveness is reflected in increased FDI, and measured by the satisfaction levels of

their intended beneficiaries and by analysing trends in indices of the business environment.

Investing in Kigali

There are several reasons why investors invest or choose to maintain their operations in Rwanda, including in Kigali City. These include the quality of the country's leadership and the associated minimized corruption incidence. The stable political and economic environment are also important, as is the general investor- and business-friendly environment in which the registration of a business takes only hours compared to days or even weeks elsewhere. Also peace, the rule of law and the security of people and property are important. Kigali, although it was associated with genocide and insecurity in the 1990s, has transformed itself into one of the world's safest cities. Also, some investors' decisions have been encouraged significantly by the government's commitment to promoting information and communications technology. The RDB's aftercare department, despite challenges remaining, is also a strong selling point for Rwanda.

Leadership

The GoR has a reputation for receptiveness and sensitivity towards foreign investors with clear commitment at the highest levels to welcoming and promoting business activity. This commitment is said to trickle down to lower-level government agencies and officials handling business-related matters. Of great significance is that President Paul Kagame is pro-actively wooing investors, travelling the world encouraging foreign investors to consider investing in Rwanda, and engaging members of the local business community to invest in priority sectors. From time to time, he engages directly with Rwanda-based investors, foreign and local, encouraging them to play their rightful role in the country's pursuit of development and social change, challenging them to aim ever higher. The President's activism is an important factor

Political stability and predictability of the political environment in which there are no violent contestations and disruption, are key attractions to potential investors and are important in investment decisions

attracting investors to Rwanda and demonstrates that the country's leadership is indeed an ally.

Political stability

Political stability and predictability of the political environment in which there are no violent contestations and disruption, are key attractions to potential investors and important in investment decisions. A stable political environment makes investors feel more secure and confident that their money is not overly at risk. Political stability and predictability go hand in hand. For businesses to thrive and prosper, they must operate in an environment where they are able to model their

growth paths and expansion strategies over the medium and long term. Government institutions and policies that make such predictability possible are crucial. Also, for businesses to thrive, they must be able to predict future trends in the economy.

One investor emphatically stressed how all these conditions attracted her to invest in Rwanda: "Political stability for me is the first thing." Peace and security are also important considerations. Investors are concerned both about personal safety and that of their investments and want assurances that both will be protected under the law. Indeed, Rwanda scores highly on these points. Another investor pointed out that Rwanda is now a peaceful country that ensures that investors are protected. These sentiments are supported by the 2016 Global Law and Order Index that ranked Rwanda as the safest country in Sub-Saharan Africa, with Ethiopia the runner up. On the entire African continent, Rwanda is second behind Egypt.

Responsive government agencies

The expectations of members of the business community with regard to predictability in their relationships with the institutions of government



Coffee, along with tin, energy and telecommunications, are the sectors which Rwanda is targeting for foreign investment

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are also important. This refers to a chain of processes, from registration to opening up and operating a business. Depending on the nature of their operations, investors come into contact with the Rwanda Development Board (RDB), the Rwanda Revenue Authority (RRA), the Rwanda Environment Management Agency (REMA), the Rwanda Utilities Regulation Agency (RURA), the National Bank of Rwanda (BNR), the Rwanda National Police (RNP), and the Department of Immigration and Emigration Services. Whereas each of these agencies has room for improvement in their interactions with investors, overall, investors assess them positively in terms of effectiveness in discharging their mandate.

One investor pointed out that the goodwill is clearly there. Investors generally characterize their relationship with government agencies as cordial and easy, with agencies endeavouring to make decisions in a consultative manner. An investor in the telecommunications sector praised the efforts of government agencies in terms of consultative cooperation with the business community to arrive at a “common understanding” on matters ranging from how businesses operate, how they are regulated, and how they should be taxed. When asked about his relationship with government agencies responsible for business facilitation, one investor in the construction sector, who has experience in Asia and in most Eastern African countries, stated:

“I have never seen a country where government responds to the queries of an investor the way they do [in Rwanda]. Whether it is RDB, RRA, or REMA.”

This was not an isolated opinion, as is evident from another investor who stated that investors are received and treated very well [in Rwanda]. “The government handles them in the best way possible. If you need a certain exemption, they facilitate it.”

The RDB has weaknesses, as already highlighted, but investors are generally satisfied with its services. While delays in resolving problems can occur and may lead to frustration, investors say that matters are worse elsewhere, especially where corruption and general dysfunction complicate life for whoever has to deal with official institutions. A Belgian investor who attempted to set up shop in two other Eastern African countries gave up because of corruption and bureaucracy and decided to concentrate his efforts on Rwanda where things are more straightforward.

Investors’ contact with the Department of Immigration and Emigration usually entails applying

for work permits for expatriate personnel or other related matters. Generally, investors characterize the department as supportive. Another investor pointed out that a lot of effort is being put into making doing business easy, which gives comfort to investors. For this purpose, an investment promotion and facilitation board has been created to help investors with several processes which, in other countries, tend to be complicated and delay business registration while often creating opportunities for public servants to solicit bribes.

Transparency

There are, at times, concerns about a perceived lack of transparency in how the government deals with or intervenes in the private sector (Booth and Golooba-Mutebi, 2012). This pertains to two emerging enterprises, Crystal Ventures Limited and the Horizon Group, owned by the Rwandan Patriotic Front (RPF) and the Rwanda Defence Force (RDF), respectively. Some believe they crowd out private investment. However, these two business groups operate as private businesses and experience the same and sometimes even more constraints than their local competitors. Despite a long-running and contested claim of a lack of transparency and reserving preferential treatment for what some believe are ‘state-backed corporations’, foreign investors generally consider that there is transparency of processes and equality of treatment with their local counterparts. The fact that they feel that they are treated equally with local investors is especially important to them when they are bidding for government contracts, such as energy deals. An investor in fuel importation confirmed that tendering processes are very transparent and that competition is open. The GoR’s efforts to make business transactions more ICT-based will raise levels of transparency. The 2015 Transparency International Corruption Perceptions Index corroborates these sentiments. It ranked Rwanda 4th in Sub-Saharan Africa in controlling corruption, and 44th in the whole world behind Botswana (28th), Cape Verde (40th) and the Seychelles (40th position).

Some local investors complain about being disadvantaged by incentives the GoR accords foreign investors. These include subsidies and tax exemptions, especially in manufacturing. Local garment manufacturers especially question the advantages foreign garment manufacturers enjoy, such as government-funded training programmes

Table 4.
Ease of doing business in East African countries 2015-2016

Year Indicator	Rwanda		Uganda		Kenya		Tanzania		Burundi	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Starting a business	117	111	168	168	148	151	122	129	18	19
Dealing with construction permits	36	37	166	161	152	149	147	126	162	165
Getting electricity	115	118	172	167	141	127	83	83	186	185
Registering property	12	12	118	120	121	115	132	133	91	94
Getting credit	4	2	128	42	118	28	150	152	171	174
Protecting minority investors	121	88	98	99	114	115	121	122	114	115
Paying taxes	47	48	101	105	99	101	147	150	111	111
Trading across borders	77	156	126	128	131	131	181	180	154	154
Enforcing contracts	123	127	78	78	102	102	64	64	144	146
Resolving insolvency	97	72	106	104	145	144	98	99	144	145
Doing business rank	55	62	135	122	108	129	140	139	152	151

Source: Mutebi, 2017

for their unskilled workers and free or subsidized premises for setting up their factories. Chinese investor C&H Garments has been especially successful at winning concessions from the government on such things as rented factory buildings and contracts to manufacture uniforms for the police and armed forces. Local investors feel the government should accord them similar benefits. Whereas this is neither a matter of lack of transparency nor corruption, local manufacturers do have a point about skewed policy that favours foreign investors over local ones.

Measuring performance

The World Bank's Doing Business Index is a composite of indicators reflecting ease of doing business in a country. In 2006, Rwanda was 158th in ease of doing business. In 2010, it rose to 67th; a leap of 91 positions. In 2013, it ranked 8th in ease of starting a business. And in 2014 it attained its best position (32nd) in ease of doing business. It has since fallen off to positions in the 50s and 60s. Nonetheless, comparison with its neighbours is instructive (see Table 4). In 2016, when Rwanda ranked 62nd, Uganda was a distant second at 122nd; Kenya an equally distant third at 129th; Tanzania fourth at 139th; while Burundi trailed at 151st close to the position Rwanda occupied almost a decade previously when it first embarked on reform.

The improvements and the good performance overall, point to the government's pro-active monitoring of the impact of the reforms and constant

adjusting (or deepening) where such a step is deemed to be necessary, which is in keeping with its longstanding 'learning by doing' approach to reform.

Trends in FDI

Has the success registered in the Ease of Doing Business rankings and the reforms that have determined Rwanda's positioning necessarily translated into actual FDI? Anecdotal evidence suggests that, despite the successful reforms, Rwanda does not attract as much FDI overall as it ought to, if compared to, for example, Uganda where the government has not been as successful in ease of doing business reforms. One of the reasons for the rather modest FDI increase is Rwanda's landlocked position, much further from seaports than (also landlocked) Uganda. This is a particular

Table 5.
Foreign direct investment 2013 to 2015

	2013	2015	2016
FDI inward flow (USD millions)	258.0	459.0	471.0
FDI stock (USD millions)	837.7	1,152.3	1,183.3
No of greenfield investments	17.0	11.0	13.0
FDI inwards (in % of GFCF)	13.4	23.0	23.6
FDI stock (in % of GDP)	11.1	14.6	14.3

Source: Mutebi, 2017; UNCTAD, 2016

impediment, even to investors who might otherwise wish to invest. One of the disadvantages of Rwanda being landlocked is that the cost of transporting goods from the ports of Dar es Salaam (Tanzania) and Mombasa (Kenya) is very high. It deters some investors because it adds to the costs of doing business. The far-reaching reforms the GoR has implemented have not removed these disadvantages. Between 1990 and 2008, FDI in Rwanda varied between zero and 4.2 percent of GDP. Much of the slow FDI growth is likely due to such structural constraints.

From 2006, however, good economic conditions, a policy focus on improving the business climate, and political stability have helped attract more investment and FDI stocks in Rwanda have increased in recent years (see Table 5). Even then, in general terms, FDI flows remained weak. In part, this can be attributed to political instability in neighbouring countries, specifically Burundi and the Democratic Republic of the Congo. These countries' political instability has had a negative impact on the entire Great Lakes region, because some potential investors have associated the political violence with the whole region. Other factors limiting the FDI attractiveness of Rwanda include low levels of human resources, its small domestic market, the high costs of doing business, and limited natural resources. Nevertheless, Rwanda has many assets rendering it attractive to investors with a long-term horizon: substantial reserves of methane gas, great mining potential, and the fact that it is one of the least corrupt countries in Africa.

In addition, the government has developed and is committed to continuing to develop supportive policies in pursuit of its ambition to make Rwanda a trade and services hub in the Eastern African region. This strategy is responsible for Rwanda's stellar performance in doing business reforms. Business registration is the one area where reforms have catalyzed a dramatic shift and led to a surge in company registrations in 2009 (3,028 new companies), almost equivalent to the total for the previous five years. In 2012, there was a 6,665 increase in company registrations.

Coffee, tea, tin, energy and telecommunications are among the sectors targeted for foreign investment. In August 2015, Rwanda hosted the China-Africa Business Forum, which attracted many investors. In February 2016, the government signed a mining agreement for a project with the Tri Metals Mining Group for USD39 million. In 2016, the Rwanda Development Board (RDB) signed an agreement with

Thomson Reuters to support further innovation within the country. A few years earlier, in 2012, the government and the American company Visa Inc. had signed a contract for the development of electronic financial services, opening the door to new investments in this sector.

As a consequence, overall, FDI has increased by 78.1 percent, according to the Central Bank's *Foreign Private Capital Census* (2015) report which showed that investments by foreign investors increased to USD458.7 million in 2014 from USD257.6 million in 2013. The report attributes the gains to the high confidence of foreign investors in Rwanda. Mauritius is the main source of investment with USD113.5 million, followed by Switzerland at USD106.2 million. The United States of America and Luxembourg come in third and fourth place with USD70 million and USD52.6 million, respectively. Among the top sectors of activity, accounting for 96 per cent of all FDI inflows in 2014, are mining at USD136.2 million; ICT at USD116.1 million; tourism at USD71.8 million, and finance and insurance at USD68.8 million. Altogether, investment in ICT reached USD453.4 million in 2014. Among the key investments in the ICT sector is the South Korean venture, Olleh Rwanda Network (oRn). Manufacturing accounted for USD172 million. Between 2009 and 2014, 338 investment projects fully owned by foreign investors or in joint ventures with local investors, were registered with a total pledged investment value of USD2,607 million. They were expected to create 55,141 jobs. Among them 211 projects were already operational by 2014; 69 were in implementation phase; 32 had closed; while 36 were still on course to start their activities.

Relationship between FDI and domestic investment

There are two main levels at which the relation between foreign and domestic sources of investment can be looked at. One is why the GoR is so keen on attracting FDI. Rwanda has a very small local private sector dominated by trading and commerce with a few large companies. The largest part of the local private sector comprises small- and medium-sized enterprises (SMEs). The government has made great efforts to help the private sector grow. While these efforts have achieved remarkable results, they could only achieve so much with a private sector steeped in a conservative outlook and growing from a very low base. It is therefore logical that the government would



Dar es Salaam in Tanzania is one of the port cities on which Rwanda relies as a landlocked country but this makes the cost of transport to Kigali and other cities very high

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seek to attract FDI to, among other things, augment its efforts. It means that, for the most part and in many instances, foreign investors are entering virgin territory, with immense opportunities in hitherto unexplored and under-explored domains such as large-scale retailing, manufacturing, value-addition, food processing, mining, minerals processing, communications, transport, and many others.

The other perspective from which this could be viewed is that FDI brings in new ideas and innovation, opening the eyes of the local private sector to new ways of doing business, and widening the range of their contacts, potential partners and collaborators. Elsewhere, local investors have benefitted from FDI by way of appointment as agents and service providers. For example, telecommunications companies and beverage makers have many agents and service providers in Kigali City and elsewhere in the country, as do food processors. Large-scale retail outlets depend on local producers for some of the commodities they sell, as do hotels for fresh produce and other products.

Therefore, the more FDI the country attracts, the more the local private sector can grow and prosper. That said, large, well-endowed foreign firms benefitting from economies of scale, sometimes inevitably cause the demise of local competitors who lack the necessary capital, experience and sophistication. However, given the small size of Rwanda's local private sector, many foreign firms enter domains in which there are few, if any, local entrepreneurs.

The significance of ICT

From the very beginning of the political struggle that would eventually bring the Rwanda Patriotic Front to power, its leadership was aware of the imperative to think of ways to bring prosperity to landlocked and natural-resource-poor Rwanda. One way was to strengthen its links with its neighbours and the wider region. The other was to exploit the opportunities offered by the ICT revolution and technology generally, and to make the private sector

the engine of development. A key aspiration was to develop a services-based economy. This was feasible only with the use of technology. Over time, Rwanda has invested heavily in ICT, making advances that no other country of similar size and circumstances has made, including wiring up its entire territory with fibre-optic cabling to enable widespread internet connectivity. In all the priority domains for investment, including services, logistics and tourism, ICT is indispensable as a central enabler. Indeed, investors in search of a stable business environment with easy communication and connectivity are setting up regional offices in Kigali. In this way, ICT is helping Rwanda overcome some of the constraints associated with its landlocked geography.

Challenges faced by investors

Overall, the experience of investors in Kigali and Rwanda generally is positive. Investors have a positive outlook on the growth of their businesses. The relative absence of competition for most businesses and the small size of the private sector in Rwanda raise confidence that there is plenty of room for both new entrants and existing companies to grow and thrive. Do local investors feel crowded out by foreign investors? According to a local investor in the pharmaceutical industry:

“There are 265 pharmacies serving 12 million people. It means we are not that many. But the geographical distribution is not good; we are concentrated in the larger towns. Therefore, our services are available to relatively few people. For that reason, there is room for investment, whether local or foreign. There’s room for manufacturers. We have zero manufacturing plants.”

However, some investors raised concerns. Paradoxically, at the same time as they characterized the service delivered by government institutions as effective and praised the enthusiasm of officials in supporting investors, they mentioned that some institutions are inadequately staffed, while others are lacking skills. On the specific issue of skills, investors argued for more agency staff with specialized skills in medical supplies, which are highly regulated. According to one investor in the pharmaceutical sector, the government needs more staff to regulate and fast-track administrative procedures in the Ministry of Health. It further needs more staff to fill the gap when those responsible for regulation and inspection attend training, conferences or meetings to ensure that work continues.

Further, investors in the pharmaceutical industry usually experience delays in acquiring import permits for medication while the product registration process is onerous. To address these issues, the GoR, aware of these problems, plans to establish a one-stop centre for handling matters related to pharmaceuticals.

Investors also stated that accessing finance is problematic. Local investors in particular are concerned about financing and the very high interest rates. An investor in the construction sector stated that the banking sector is a major problem:

“They give you a loan and want you to pay it back within a year. The interest charged is too high, rendering borrowing risky. Whereas the government sets the price of petrol, why not also set interest rates for the banks? Rwanda should, like other countries do, find cheap capital for investors to borrow and invest.”

While investors cite constraints in access to financing, World Bank reports rank Rwanda highly on the indicator of credit. This, however, refers to the legal framework for credit and does not necessarily imply ease of access to financing. Investors further cited the depreciating Rwandan Franc and general currency instability as problematic for the business community, not least how this affects importing goods.

Finally, investors believe the cost of fuel and electricity is too high. Utility costs in Rwanda are the highest in the Eastern Africa region and the supply unreliable. Some investors are hesitant to shift their manufacturing operations to Rwanda because they fear the high cost and unreliability of electricity supply could interfere with production.

There are also challenges related to Rwanda’s regulatory environment, especially its strict environmental protection laws. For example, prohibition of the use of plastic bags has imposed unexpected costs on some investors who have had to re-think their packaging, besides those who had invested in the manufacture of plastic bags. In addition, stringent planning and zoning laws are some of the factors causing delays in the operationalization of some investment projects. They often delay processes such as land acquisition after registering a company. The same legislation has obliged investors who had set up in areas outside the designated industrial zones to relocate, with serious financial implications. Behind these forced relocations is the imperative to ensure that industrialization happens in tandem with sound urban environmental management as specified in Vision 2020.

These challenges aside, there is no suggestion that any of these challenges are a deterrent to investment. On the contrary, they point to the overall capacity of the GoR to get things done.

Conclusions

As a city, Kigali has come a very long way since its founding in 1906 and especially so since the civil war and genocide. From an insular colonial backwater, the city has slowly evolved into a veritable and vibrant metropolis. Its rapid transformation, coupled with the government's commitment to creating a favourable environment for doing business and the President's pro-active engagement with business at home in the Great Lakes region, elsewhere in Africa and beyond the continent, have been pivotal in attracting foreign direct investment.

As a city, Kigali has come a very long way since its founding in 1906 and especially so since the civil war and genocide. From an insular colonial backwater, the city slowly evolved into a veritable and vibrant metropolis

From a country once dismissed as incapable of recovering from the effects of war and genocide and destined to become yet another failed African state, Rwanda has become a magnet for investors seeking an environment that works and that is devoid of the obstacles that make doing business in some African countries difficult and costly. That said, Rwanda does not attract as much FDI as it should, if compared to its immediate neighbours such as, for example, Uganda. Nonetheless, foreign investors in Kigali or elsewhere in Rwanda generally believe that their decision to invest in this country was the right one. They particularly praise the working relationship with government bodies that are clearly committed to assisting the community of investors; a view shared by both local and foreign investors. Qualitative assessment shows a high level of investor satisfaction regarding the decision to select Rwanda as their business location due to high satisfaction with the business

environment. Indeed, the quantitative indicators show that the reforms the government has undertaken to enhance the business environment for foreigners are working. In the international indices, Rwanda ranks favourably. Further, data from the Government of Rwanda confirm progressive increases in foreign direct investment. There are still challenges, however. The high cost of doing business, the small internal market, lack of skills, or structural constraints such as lack of easy access to seaports, are most frequently mentioned. Nonetheless, overall there is ample optimism that Rwanda, and Kigali in particular, present extraordinary opportunities for both foreign and local investors.

Recommendations

The GoR has made and continues to make remarkable efforts towards attracting both foreign direct and local investments. However, some matters call for attention if greater advances are to be made or if the achievements already made are not to be undermined. The following recommendations seem particularly apt:

- The GoR needs to consider providing the same incentives that it accords foreign investors to members of the local business community, especially to those that have invested in the same sectors as their foreign competitors. Particular attention should be given to the textile and garment sector in which foreign investors have secured incentives such as tax waivers that are not available to Rwandans.
- Although the Rwanda Development Board has played a significant role in creating and maintaining a favourable environment for FDI, there remain challenges that stem from inadequacies in inter-agency coordination. If addressed, this would clear up obstacles that stand in the way of rapid operationalization of investment projects in Rwanda.
- In addition to coordination matters, there are also challenges associated with a lack of appropriate skills, expertise and experience among staff of (most notably) the regulatory agencies. Skills-building is therefore necessary to fill existing gaps.

The GoR should also work more closely with the local banking sector to explore ways to increase investors' limited access to financing.

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Foreign Direct Investment into African Cities: Insights from African Economic Outlook 2016 and 2017

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Foreign direct investment (FDI) into Africa has grown quickly in recent years (Figure 1). FDI was estimated to reach USD56.5 billion in 2016, a 23% increase over the level in 2010. FDI now accounts for almost a third (32%) of total financial inflows into the continent and exceeds the level of official development assistance for Africa (USD 50.2 billion) (AfDB/OECD/UNDP, forthcoming). FDI to Africa represented 11.5% of global FDI in 2016, with 642 projects accounting for 4% (fDi Markets, 2017). Investors come from both developed countries, notably from the United Kingdom, France, the United States, and from the emerging economies of China, India, South Africa and the United Arab Emirates. The latter group are investing more heavily into Africa: Chinese companies announced more than USD30 billion in investment in greenfield projects across Africa in 2016, compared to USD8 billion in 2008.

Non-resource-rich countries are becoming more attractive destinations for FDI even though investment is still mainly directed at resource-rich countries (Figure 2). Non-resource-rich countries are projected to receive 40% of the share of FDI in 2017, compared to 33% in 2015 and 24% in 2009. Consequently, the FDI-to-GDP ratio for non-resource-rich countries is projected to stand at 4.4% in 2017, twice the level of 2002. In contrast, the ratio for resource-rich countries will be halved from 4% to 2% over the same period.

Foreign investments are diversifying into services and manufacturing to take advantage of the local market. More than 50% of greenfield projects were motivated by access to domestic markets and about one-third of FDI was driven by proximity to regional markets and consumers (AfDB/OECD/UNDP, forthcoming). Morocco, for instance, is benefitting

Figure 1. External financial flows to Africa, 2005-2017

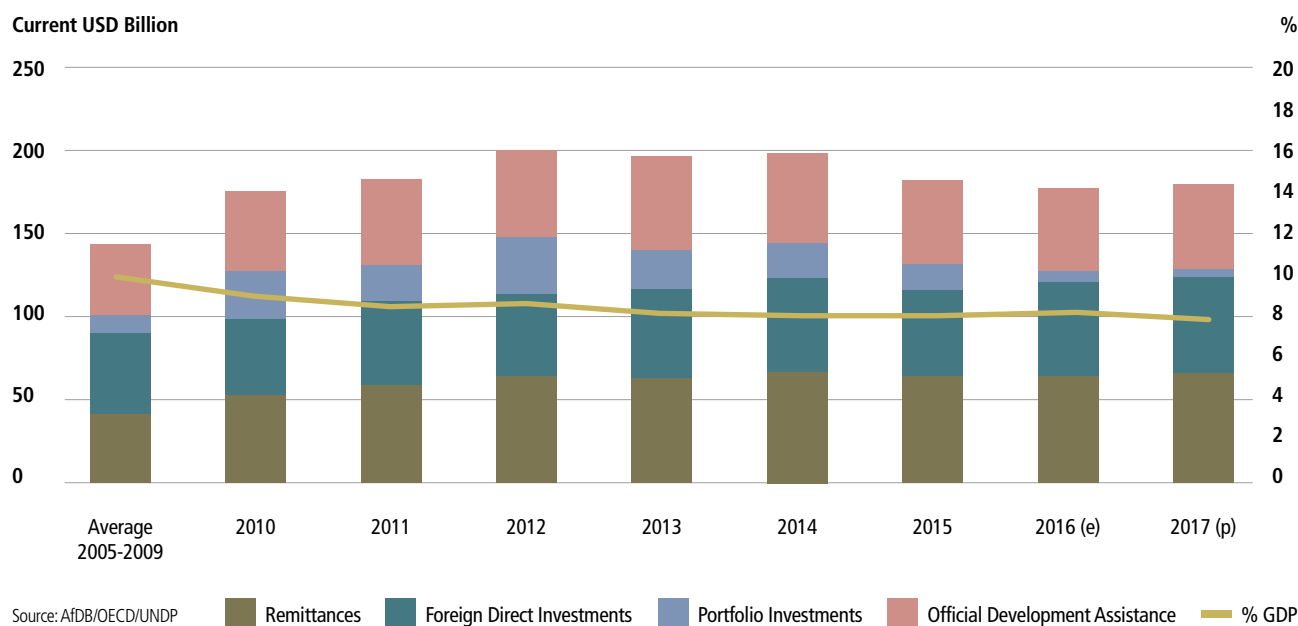
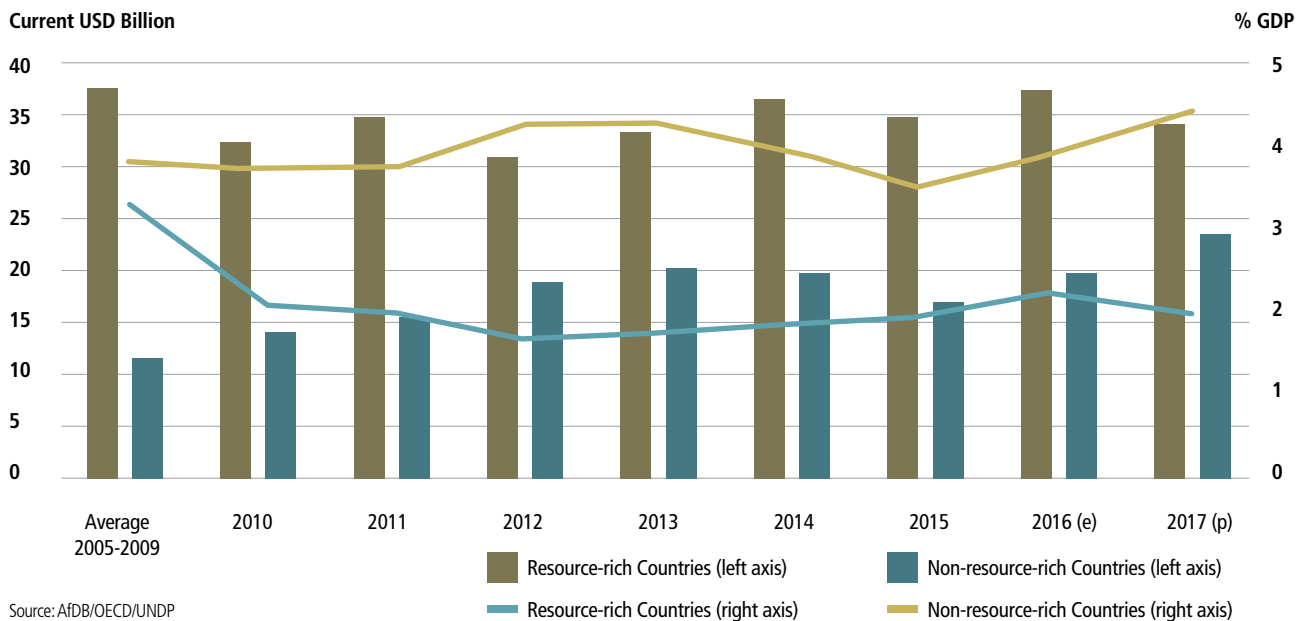


Figure 2. Foreign direct investment into Africa: resource-rich vs. non-resource-rich countries, 2005-2017



from FDI flows to the auto industry, with greenfield investment in 2016 amounting to USD1.3 billion (fDi Markets, 2017), notably from PSA Peugeot-Citroen and Renault (France) and Ford (United States). This trend is a consequence of a relatively business-friendly environment, good industrial policy, growing urban consumer markets, good infrastructure and favourable trade agreements (UNCTAD, 2016).

At city level, the top six destination cities in Africa are Arabic-speaking cities in North Africa, while the Anglophone cities of Sub-Saharan Africa rank lower (AfDB/OECD/UNDP, 2016). In particular Cairo attracted USD37 billion and Tunis attracted USD22 billion in FDI between 2003 and 2014. With regard to FDI from within Africa, the most popular destinations are Cairo (18%), Luanda (11%), Lagos (10%), Tunis (6%) and Johannesburg (6%). Relative to GDP, Sub-Saharan African cities featured in the top 10% of global attractors of greenfield FDI between 2002 and 2012, as often as cities in the East Asia and Pacific region (World Bank, 2015).

FDI usually brings knowledge and technology to a region through productivity spill-over to domestic firms, and leads to new urban projects. The agglomeration economies from industries locating in a given area are higher in Sub-Saharan Africa when domestic firms locate close to foreign multinationals, especially those coming from developing countries from the Global

South (Sanfilippo and Seric, 2014). By contrast, direct employment by FDI firms is often limited in scope to a growth-enhancing effect. In a global sample of 750 cities, FDI only created 1,400 jobs per city directly, or 0.1% of the employment base, among the FDI-recipient cities in 2012 (Fikri and Zhu, 2015).

While the success of each investment strategy depends on the specific characteristics of a city and country, Zhu, Larrey and Santos (2015) point out a four-step method for city governments: i) identify and communicate the city's value proposition in line with the regional and national strategies; ii) build the city's brand and address any negative perceptions; iii) co-ordinate with different institutions and government agencies to provide comparable, credible and timely information to investors while nurturing local partners and networks; and iv) provide targeted incentives to those firms hesitating to invest and foster positive relationships with existing investors. For example, in Morocco, Tangiers has utilised national investment in a large new seaport facility and regional infrastructure to attract major European automobile assembly lines. City stakeholders collaborated with the national investment promotion agency and multinational companies throughout the process. The consultation identified a skill shortage and helped set up a training centre for local labour in the automobile sector.

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Foreign Investments in the Peripheral Global South

By Lucia Gómez, Ronald Wall and Päivi Oinas

Worldwide flows of foreign direct investment (FDI) are increasingly targeting countries in the Global South. Understanding what attracts foreign investors to the South helps shed light on how policy can support the countries in making the most of those investments in terms of their developmental impact.

Analyses of global FDI targeting the South between 2003 and 2014 (fDi Markets database) shows that the rising importance of the South in global investment networks is mainly caused by the faster growth of investments either targeting or originating in the periphery (see Figure 1 for the definition of peripheral countries). The analyses further show that the peripheries also attract investments from countries at different levels of development. They are able to satisfy the requirements of investors involved in a range of value-added activities and thereby become entangled in complex global investment networks.

In order to design and implement effective policy measures it is important to understand the conditions under which the peripheries enter these networks. That is, policymakers in the economies receiving FDI need to understand the factors that attract diverse investors. Whatever their origin, effective policy should regulate

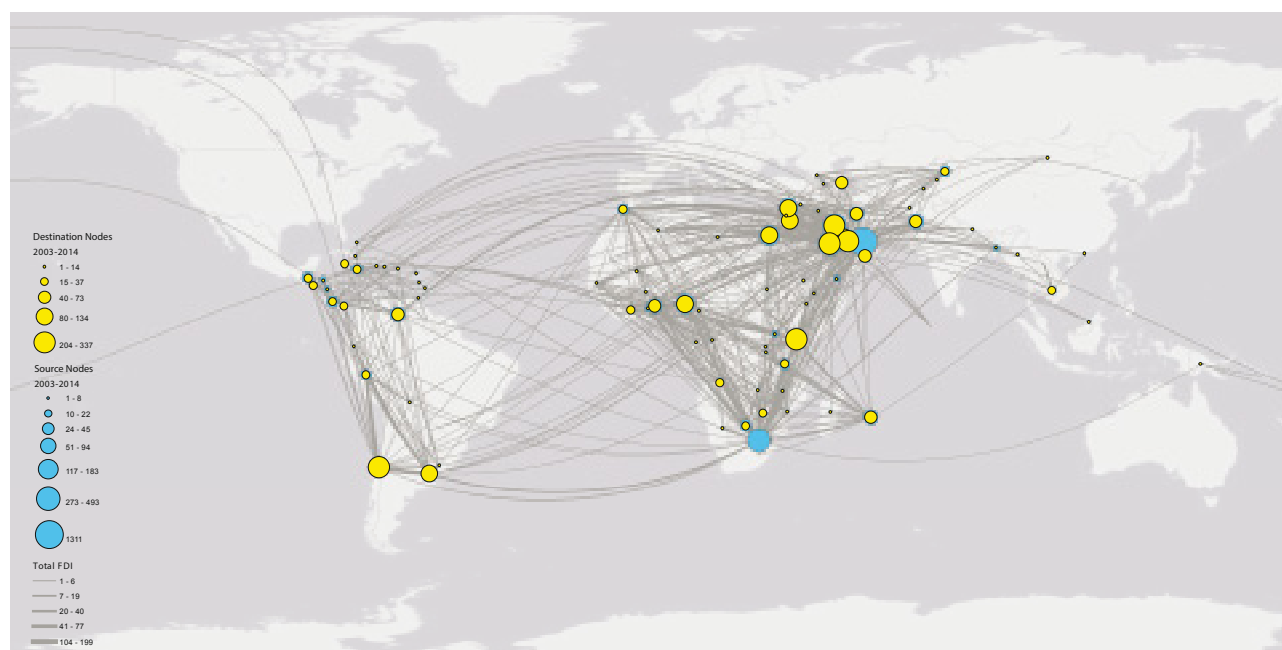
Effective policy should regulate the activities of foreign firms so as to avoid detrimental effects on the one hand and create incentives to strengthen beneficial developments on the other

the activities of foreign firms so as to avoid detrimental effects on the one hand and create incentives to strengthen beneficial developments on the other. Also, their investment promotion campaigns and branding strategies can be shaped more accurately to target the types of investors that can be expected to support sustainable development at the receiving end.

The analyses of FDI data suggest the following considerations for policymaking:

- Investments from advanced economies of the North are discouraged by factors that decrease market efficiency (intensity of local competition, and heavy bureaucracy increasing the number of days it takes to start a business). They are encouraged in contrast by the availability of the latest technologies, the size of the market in the receiving country, as well as their export markets into third countries. These factors indicate that investments from the North are not motivated by engagement with the local economy. They do not necessarily make other contributions to the local economy besides (low-skilled) employment. Policy makers should be aware of the above situation(s) and seek to find solutions to engage foreign and indigenous firms in partnerships that are advantageous to both parties.
- Investments originating in semi-peripheral countries of the South are determined by the size of the export markets of the target countries, as well as the technological absorption capabilities of local firms. The significance of market size possibly indicates that they serve as exporting platforms, or as production sites of intermediate products as part of global value chains. However, since the investments appear to be determined by the presence of firms capable of absorbing new technologies, it could be assumed that firms originating in the semi-peripheral countries of the South are likely to actively engage local firms in their operations. Policy can support local firms in meeting a foreign investor's technological requirements so as to create a solid partnership. Further, policy can also support networking between foreign and local firms by creating collaborative spaces and programmes. This can facilitate local firms learning from foreign investors and stimulate knowledge creation for mutual benefit.

Figure 1. FDI between southern periphery countries (2003-2014)



The classification of countries is based on Brandt's (1981) North-South divide and Van Hamme and Pion's (2012) core-periphery classification

Cores of the Global South: a handful of countries (excluded from the analysis).

Semi-peripheries of the Global South: Brazil, China, Colombia, India, Indonesia, Malaysia, Mexico, Philippines, Singapore, Sri Lanka, Thailand, Tunisia, Turkey, Vietnam

Peripheries of the Global South: Afghanistan, Algeria, Angola, Antigua, Argentina, Armenia, Aruba, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belize, Benin, Bhutan, Bolivia, Botswana, Brunei, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Cayman Islands, Central African Republic, Chad, Chile, Comoros, Congo (DRC), Costa Rica, Cote d'Ivoire (Ivory Coast), Cuba, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, French Polynesia, Gabon, Gambia, Georgia, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Laos, Lebanon, Lesotho, Liberia, Libya, Macau, Madagascar, Malawi, Maldives, Mali, Martinique, Mauritania, Mauritius, Micronesia, Mongolia, Morocco, Mozambique, Myanmar (Burma), Namibia, Nepal, New Caledonia, Nicaragua, Niger, Nigeria, North Korea, Oman, Pakistan, Palestine, Panama, Papua New Guinea, Paraguay, Peru, Puerto Rico, Qatar, Republic of the Congo, Reunion, Rwanda, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, South Sudan, St Lucia, Sudan, Suriname, Swaziland, Syria, Tajikistan, Tanzania, Timor-Leste, Togo, Trinidad and Tobago, Turkmenistan, Turks and Caicos Islands, UAE, Uganda, Uruguay, Uzbekistan, Venezuela, Yemen, Zambia, Zimbabwe.

- Investments originating in peripheral countries of the South (Figure 1) are determined by export possibilities from their peripheral host countries. However, they are also determined by easy and affordable access to financial services and loans that the peripheral locations provide. This indicates that well-functioning financial services give a competitive advantage to countries that otherwise compete only on the bases of low production costs. Policy could support the establishment of local financial institutions that would serve both foreign and local firms, or provide regulations so that foreign banks can enter their markets.

In conclusion, the key determinants positioning peripheral countries in global investment networks are market size and efficiency, the technological capabilities of indigenous firms, and well-functioning financial infrastructure. Policies aimed at upgrading the capability of indigenous firms, supporting network building, and improving market efficiency create preconditions for the operation of investor firms and their positive engagements with the local economies of peripheral countries. Finally, it is important to attract investments from diverse origins, not just investments by firms from global core countries. Attracting investments especially from other countries in the South can be more beneficial for local development.

