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Compact with Africa

Fostering Private Long-Term Investment in Africa

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Contents

Abbreviations

Executive summary 1

Introduction 3

Part 1 Institutional investors for African infrastructure: the fit and the barriers 5

1 Introduction 5

2 The fit: institutional investors and Africa 6

3 The potential of institutional assets for infrastructure investment in Africa 8

4 Regulatory supply-side barriers 10

5 Low-income Africa's host barriers 13

6 DFI instruments: investment funds, blending and risk mitigation 15

7 Prudent insights and policy conclusions 18

Part 2 Foreign direct investment in Africa: structural transformation and higher employment 21

1 Introduction 21

2 African growth dynamics and structural transformation 21

3 FDI as an accelerator of structural transformation and employment: the debate 24

4 Foreign direct investment in Africa: the trends 26

4.1 FDI on the rise since the turn of the century 26

4.2 A gradual shift from resource-driven FDI to FDI in consumer sectors 30

4.3 Urban agglomerations become main hubs of investment 34

4.4 Global and regional value chain investments are on the rise 36

5 Conclusions: upgrading Africa's potentials – what matters most? 40

References 45

Tables

Table 1: Africa Infrastructure Development Index 7

Table 2: Who is financing Africa's infrastructure? (External finance) 8

Table 3: Global assets managed by long-term institutional investors (\$ trillions/year) 9

Table 4: Comparison of Basel III and Solvency II capital charges for infrastructure debt; corporate debt rating – duration 12

Table 5: Eligibility to access AfDF funding (number of countries: out of 54 total) 13

Table 6: The infrastructure funding escalator 15

Table 7: Gross external capital flows to Africa (annual averages, 2012-2014) 17

Table 8: Allocation of FDI, ODA and DFI mobilised funds per income group in Africa* (mean percentage shares during 2012-2014)	18
Table 9: Top 10 recipient countries of FDI projects, 2015	27
Table 10: Stock of FDI in Africa, by origin (\$ billions)	32
Table 11: Greenfield investment flows to Africa, 2010-2015 (\$ millions)	33
Table 12: Interaction within a value chain	37

Figures

Figure 1: FDI in Africa – inflows and stock, 2000-2015	26
Figure 2: FDI projects in Africa, 2006-2016	27
Figure 3: Correlation of FDI (in %) of GDP and DTF, 2010 and 2015	29
Figure 4: FDI into Africa: resource-rich countries versus non-resource-rich countries, 2004-2016	30
Figure 5: Top 10 sectors by FDI projects, 2015	31
Figure 6: Sectoral distribution of China's and India's greenfield investment (in \$ billions), 2003-2015	33
Figure 7: Top 15 African clusters by FDI projects and share in total African FDI projects, 2007-2013	36
Figure 8: Sub-Saharan Africa and comparator countries: average depth of integration in global value chains, 2008–2012	40

Abbreviations

AAI	Africa Attractiveness Index
AfDB	African Development Bank
AfDF	African Development Fund
AIDI	Africa Infrastructure Development Index
BRICS	Brazil, Russia, India, China and South Africa
CPR	consumer products and retail
DAC	Development Assistance Committee
DFI	development finance institution
DIP	diversified industrial product
DTF	distance to frontier
FDI	foreign direct investment
FSB	Financial Stability Board
GDP	gross domestic product
GVC	global value chain
ICA	Infrastructure Consortium for Africa
ICT	information and communications technology
IMF	International Monetary Fund
LIC	low-income country
MDB	multilateral development bank
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
PCG	Partial Credit Guarantee
PPP	Public-Private Partnership
PRG	Partial Risk Guarantee
PSF	Private Sector Credit Enhancement Facility
R&D	research and development
RHC	real estate, hospitality and construction
RVC	regional value chain
SDG	Sustainable Development Goal
SEZ	special economic zone
SME	small and medium-sized enterprise
SWF	sovereign wealth fund
TMT	technology, media and telecommunication

Executive summary

With its “Compact with Africa”, the German G20 Presidency intends to encourage private institutional and corporate investment, together with the African partners. The objective is to boost growth and jobs, promote inclusion and give people economic prospects at home so that they do not have to leave their home country to seek subsistence elsewhere. Stimulating private sustainable investment in Africa has been a longstanding G20 policy target.

Both institutional investments, for example through pension funds and life insurers, as well as corporate investments in the form of foreign direct investment (FDI) can benefit Africa. Institutional investors enjoy long-term liabilities in their balance sheets, which is essential to fund Africa’s infrastructure, a central growth prerequisite for the continent. FDI, in turn, requires modern infrastructure, especially energy and connectivity, to fully deploy its external benefits. FDI can entail benefits for the modernisation of production capacity; knowledge transfer; integration into global value chains and regional value chains; as well as employment for the jobless. Corporate FDI reflects a long-term commitment and is hard to reverse, thus providing stability.

Total assets managed by long-term institutional investors are projected to reach \$100 trillion by 2020, up from \$62 trillion just eight years earlier. To fill Africa’s annual infrastructure funding gap of \$50 billion, 1 per cent of new institutional investment by pension funds, life insurance companies and sovereign wealth funds would need to be invested in Africa’s infrastructure every year. Yet, despite the longstanding policy focus of G7/G20 leaders, private long-term investment in Africa’s infrastructure has remained deficient. Private finance still plays a minority role in funding Africa’s infrastructure. Since 2010, Africa’s infrastructure deployment has become uneven and, on average, has not progressed further. Why has the decade-long G7/G20 push for private investment in Africa’s infrastructure failed to produce better results so far? Regulatory supply-side barriers for investors and low-income Africa host barriers have been identified as root causes. To help improve the situation, appropriate dialogue partners not envisaged so far are identified, especially prudential regulators.

FDI inflows produce important effects that go beyond spillovers to domestic firms. They contribute to structural change, but the effects of different FDI inflows vary (FDI in resource-driven countries vs. consumer-oriented industries). The shift of FDI to consumer sectors has created jobs, mainly low-skilled ones. Some middle-income African countries have managed to enter global value chains. Generally, a stronger integration of African countries into global value chains may foster the absorption of technology, build skills and promote inclusive growth. The paper shows that the transfers of technology and spillover effects are still limited; a systematic trend can hardly be identified.

In order to drive structural transformation in Africa, some policy prerequisites are seen as key: apart from political and macroeconomic stability, these prerequisites are improved transport systems and energy access to generate agglomeration benefits and industrial clusters. Job creation in small and medium-sized enterprises (SMEs) requires that barriers be removed. Regional economic integration is essential for Africa to realise its full growth potential, to participate in the global economy and to share the benefits of an increasingly

connected global marketplace. Many African economies are still resource-intensive and FDI inflows mainly resource-driven. Dominance of resources, low levels of manufacturing and widespread informal economic activities do not appear to be the appropriate foundations for long-term, sustainable and jobs-driven growth.

The main 10 policy recommendations:

1. Initiation of a structured dialogue between prudential regulators of savings institutions and development partners to remove prudential barriers to institutional investment in Africa.
2. Identification of viable components of infrastructure projects and revenue streams in cooperation between institutional investors and development finance institutions.
3. Handling of contingent liabilities for weak African public budgets that may arise from public–private partnerships from the start of jointly financed projects.
4. Provision of local currency finance to unhedged and vulnerable borrowers by multilateral development banks to avoid currency mismatches.
5. Provision of various forms of credit enhancement, structured finance and hedging solutions by multilateral development banks to increase the attractiveness of local-currency bond offerings.
6. Promotion of a favourable investment climate (such as access to finance and imported inputs, enforcement of contracts, reliable regulatory standards, improved infrastructure) for local firms and foreign investors.
7. Promotion of a change in industrial policy to develop national industries to raise the potential of upgrading in global value chains through tax incentives and local content requirements.
8. Facilitation of the formation of industrial clusters through business development services, better transport systems, qualified labour, cooperation with research institutions and access to electricity.
9. Promotion of regional economic integration, stronger intraregional cooperation, connectivity, regional market expansion and intraregional investment in infrastructure (roads, electricity, internet networks, ports and railways).
10. Transforming the SME sector to become a more sustainable employer with backward and forward linkages to large domestic firms and foreign companies.

The “Compact with Africa” has suggested a great number of “policy commitments” for African partner countries that are deemed necessary to facilitate private infrastructure and corporate foreign direct investment. These commitments have not been subject to the reality test of the difficult political and institutional environments in many poor countries. Such a “laundry list” approach to reform has proven ineffective, as it assumed that all developing countries suffer from the same problems, and that all of the problems were equally important. However, an unweighted check-off of selected governance elements has led to an undifferentiated reform programme that fails to target an economy’s most severe bottlenecks under the constraint of scarce political and administrative (human) capital.

Introduction

The G20 initiative “Compact with Africa” aims at encouraging the conditions for long-term private investment, investment in infrastructure as well as economic partnership and employment in African countries to promote sustained and exclusive growth. Both institutional investments by pension funds and life insurers as well as FDI can benefit Africa. Institutional investors enjoy long-term liabilities in their balance sheets (unlike commercial banks or hedge funds), which are essential to fund Africa’s infrastructure and a central growth prerequisite for the continent. FDI, in turn, requires modern infrastructure, especially energy and connectivity, to fully deploy its external benefits. FDI can entail spillovers for the modernisation of production capacity; knowledge transfer; integration into global value chains and regional value chains; as well as employment for the jobless. Unlike portfolio flows, corporate FDI reflects a long-term commitment and is hard to reverse, thus providing stability.

This discussion paper examines two topics of the initiative in detail: corporate direct investment and institutional investment in infrastructure. Investment in infrastructure is considered a priority to attract private investment and to promote Africa’s economic integration with the rest of the world. Part 1 of this paper, “Institutional investors for African infrastructure” by Helmut Reisen, discusses the potential role of institutional assets for infrastructure investment in Africa. Part 2, “Foreign direct investment in Africa: structural transformation and higher employment” by Robert Kappel and Birte Pfeiffer, analyses private investment as a driver of structural change in Africa. The policy recommendations of both parts give an outline for fostering long-term investment in Africa.

Part 1

Institutional investors for African infrastructure: the fit and the barriers

1 Introduction

The G20 policy focus on fostering private-sector engagement in funding sustainable infrastructure in Africa is anything but new. Before the G20 was inaugurated on a leader's level in 2008, Africa's infrastructure gap became officially recognised in July 2005 at the G8 Summit in Gleneagles (UK). Throughout the 2010s, G20 leaders have highlighted the importance of private long-term financing – focusing on infrastructure investment – to foster long-term growth. At the G20 meeting in Moscow in 2013, G20 leaders established a Study Group on Financing for Investment with the cooperation of international organisations to analyse obstacles and limitations delaying long-term financing and determine a work plan for the G20. Among the international efforts to leverage institutional investment for infrastructure and other long-term investment, the G20-OECD High-level Principles of Long-term Investment Financing by Institutional Investors aim at facilitating and promoting long-term investment by institutional investors, including pension funds. The rationale for private investment in Africa by long-term institutional investors (pension funds, life insurers, sovereign wealth funds) is high, but so are the barriers.

Part 1 first presents in Section 2 the projected asset base of institutional investors and points to their balance-sheet qualities and concludes: they would indeed make a very good fit for funding Africa's infrastructure. Projected to reach \$100 trillion by 2020, institutional investors would need to invest 1 per cent of their annual new inflows to fund Africa's infrastructure gap.

However, it is subsequently shown in Section 3 that pension funds and life insurers have had little return and regulatory incentive to leave the comfort zone of liquid OECD (Organisation for Economic Co-operation and Development) securities markets so far. It is then explored as to why the decade-long G20 push for private investment in Africa's infrastructure has failed to produce results. Regulatory supply-side barriers and low-income Africa host barriers have been identified as root causes. The paper also names appropriate dialogue partners: ultimately, encouraging the long-term investment of pension funds and life insurers in infrastructure, including in Africa, will require the G20 to engage in a coordinated dialogue with the regulatory authorities and the Financial Stability Board (FSB) – the international body of finance ministers, central bankers and other agencies established in 2009 after the global financial crisis.

As for general host-country barriers (Section 4), most African countries remain poor, have immature domestic financial markets and have featured deteriorating scores for safety and rule of law. This holds true in particular in those low-income countries (LICs), such as in the Sahel Zone, where present demographic and future migration pressures remain extremely high (Garenne, 2017). Common infrastructure project risks (completion, performance, revenue, financing, maintenance and operation risks) also weigh heavily in low-income Africa in particular. A prominent role of institutional investors can only be envisaged towards the end of the “infrastructure funding escalator” (explained in Table 6). Consequently, private funds mobilised by development finance institutions (DFIs) seem to have shied away from the “Bottom Billion”.

Despite policy efforts to mobilise private finance through official development finance interventions, they so far have represented a small fraction of the flows directed to low-income Africa (Section 5). The central dilemma is that low domestic savings levels, weak government finances and a low debt tolerance militate against forcing foreign private debt and contingent fiscal liabilities upon low-income African countries where infrastructure deficits are most blatant. Grants, remittances and foreign direct investment (FDI) equity finance should be preferred over debt-creating finance, as International Monetary Fund (IMF) debt sustainability assessments have deteriorated in a number of Africa's countries, not least due to public infrastructure commitments (Section 6).

2 The fit: institutional investors and Africa

Whereas most industrialised economies will see their labour forces shrink, an additional 100 million people will reach the working ages of between 15 to 64 by 2035 in Africa – almost double the number that will be added by the rest of the world. The IMF estimates the working-age population in sub-Saharan Africa will reach 1.25 billion by 2050. This demographic evolution will raise capital-labour ratios and reduce the returns to capital in aging countries, whereas a rising share of sub-Saharan Africa's working-age population will increase the continent's productivity potential and capital returns in Africa. This constitutes the economic case for sending long-term savings to younger economies.¹ This economic case has been joined recently by added pension pressures due to tumbling interest rates.

In a world of low or even negative risk-free interest rates, institutional investors might have a hard time earning decent returns on their asset base. The global search for yields is likely to drive long-term investors to look beyond OECD bond and equity markets into so-called alternative investments. Pension funds, life insurers² and sovereign wealth funds (SWFs) are characterised by the long-term natures of their balance-sheet liabilities, which enables them to invest for the long-term in infrastructure projects with long gestation periods.

Asset classes such as infrastructure, which is valued less frequently and can therefore have a lower ex-post standard deviation of returns, can be a way for funds to maintain higher return targets while dampening portfolio volatility. As summarised in a recent EY (2015) report, infrastructure investments are an interesting option for an insurer's portfolio, as they provide:

- potentially lucrative risk-adjusted returns on equity,
- long-term risk exposure, which may provide a good match for long-term liabilities,
- illiquidity and sector diversity, which could increase portfolio diversification, and
- an opportunity to lend money to sectors in need of funding, leading to social and potentially reputational benefits.

1 See the collected essays in Reisen (2000).

2 Not all insurers have long-term liabilities. Casualty insurers, for example, have short-term liabilities. In Europe, however, life insurance companies hold 80 per cent of the assets held by insurers.

Simultaneously, there is a significant need for investing in sustainable infrastructure to achieve both the 2030 Agenda for Sustainable Development as well as the Paris Agreement. This paper mirrors the G20 development focus on Africa, although half of the world's billion poorest people are projected to also live in South Asia (Garraway & Reisen, 2015). Africa offers the potential to generate decent returns to those investors, notably through financing infrastructure.

Mind the gap. Notwithstanding the recent surge in public investment, most African countries still face severe infrastructure gaps, and tackling poverty and promoting inclusive growth will require substantial financial resources. Estimates of how much funding would be required for Africa to meet the needs for the Sustainable Development Goals (SDGs) vary, but they are in the order of the hundreds of billions of dollars. According to the World Bank's Africa Infrastructure Country Diagnostic, the infrastructure need of sub-Saharan Africa will exceed \$93 billion annually over the next 10 years (Foster & Briceno-Garmendia, 2009). To date, less than half that amount is being provided (mainly from domestic and foreign official sources, with about half from China), thus leaving an annual financing gap of more than \$50 billion to fill (IMF [International Monetary Fund], 2014).

The poor state of infrastructure in sub-Saharan Africa – its electricity, water, roads, and information and communications technology (ICT) – cuts national economic growth by two percentage points every year and reduces productivity by as much as 40 per cent (African Development Bank Group, s.a., “Infrastructure finance”). Africa's biggest infrastructure shortcomings – even on a peer comparison of sub-Saharan countries with other LICs – are in the areas of transport (paved-road density in kilometres per 100 square kilometres of arable land), telecommunications (mainline telephone density in lines per thousand population), electricity (generation capacity in megawatts per million population), and water and sanitation.

Region/year	2000	2010	Latest
North Africa	33.6	63.8	60.3
Southern Africa	22.8	35.2	34.5
West Africa	11.1	16.3	18.8
Central Africa	8.7	15.7	16.7
East Africa	5.6	11.6	14.7
Average, unweighted	16.5	28.5	29.0

Source: Author's calculation, based on African Development Bank Group (2013, 2016b)

During the first decade of the 2000s, all African regions made progress in improving their infrastructure, but since 2010 Africa's infrastructure deployment has become uneven and, on average, has not progressed further. The Africa Infrastructure Development Index (AIDI),³ presented in Table 1, is a composite index running from 0 to

3 The AIDI, developed by the African Development Bank, covers four sectors: (i) transport, (ii) electricity, (iii) ICT and (iv) water and sanitation. These sectors are measured by nine indicators. The AIDI is a weighted average of the normalised sub-indices of the four sectors. The AIDI methodology is described here: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Economic_Brief_-

100 (full equipment), almost doubled in unweighted average terms from 2000 to 2010. Improvements in the overall index were mostly driven by enhancements in ICT, and to a lesser extent better access to water and sanitation. In the last years, the index has continued to rise in West, Central and East Africa but has come down in North and southern Africa.

Addressing the infrastructure gap remains critical to allow new higher-productivity sectors to develop and to generate jobs for the rapidly growing young population. The scope for funding the gap from the large asset base of pension funds, life insurers and SWFs remains unexploited.

3 The potential of institutional assets for infrastructure investment in Africa

Despite the longstanding policy focus of G8/G20 leaders, private long-term investment in Africa's infrastructure has remained deficient. As Africa's infrastructure gap became officially recognised, the Infrastructure Consortium for Africa (ICA) was established in July 2005 as a recommendation to the G8 Summit in Gleneagles (UK) by the Commission for Africa. Subsequently, G20 leaders have highlighted the importance of private long-term financing to foster long-term growth (OECD [Organisation for Economic Co-operation and Development], s.a.), in particular since 2012. Private finance still plays a minority role in funding Africa's infrastructure. Table 2 documents the share of private finance in funding Africa's infrastructure; it has apparently declined between 2012 and 2015, from 23 per cent in 2012 to 15.6 in 2015.⁴

	2011	2012	2013	2014	2015
Private (%)	7.5	23.0	19.9	18.2	15.6
Public (%)	92.5	77.0	80.1	81.8	84.4
Total (\$ billions)	31.9	37.9	44.1	28.0	47.5

Source: Infrastructure Consortium for Africa (2016)

In 2015, almost all private investment in African infrastructure (97 per cent) went into the energy sector, according to the Private Participation in Infrastructure Project database. These were predominantly investments in South Africa and Morocco, reflecting largely Morocco's vast \$9 billion Ouarzazate solar power plant and the Eskom Investment Support Project for South Africa. These are middle-income countries where debt issuances usually have the scale to attract institutional investors, in particular pension funds, which require issuances exceeding \$500 million. Such a scale might be difficult to achieve in LICs. Note also that the energy sector lends itself to debt finance, since operational costs as well as financing costs can principally be covered by user fees. This is also possible in the telecommunication sector and some other types of infrastructure (airports, ports), but not for the bulk of transport infrastructure, and not for water/wastewater, where there is

⁴ _The_Africa_Infrastructure_Development_Index.pdf. There is no index available for Africa's "green" infrastructure.

4 For data, we rely on ICA (2016).

often political resistance or too much poverty in LICs preventing the covering of costs of user fees.

There is fairly sketchy evidence on the total asset base of institutional long-term investors. Taken together, total assets managed by pension funds, insurance companies and SWFs are projected by PwC to reach \$100 trillion by 2020, up from \$62 trillion just eight years earlier (Table 3).

- The OECD’s “Annual Survey of Large Pension Funds and Public Pension Reserve Funds” only seems to cover a fraction of total global pension assets due to incomplete reporting and its focus on large funds. The most recent survey (released 2016) reviews trends in assets and asset allocation of 99 retirement schemes, which managed \$10.3 trillion in assets in 2014. Total global *pension assets* of the world’s largest 300 funds were reported at \$14.8 trillion in 2014, according to research conducted by Willis Towers Watson in their “Global Pension Asset Study”. Based on TheCityUK data, PwC reported global pension assets at \$33.9 trillion already by 2012.
- According to Statista, the assets of *insurance companies* globally amounted to \$27.9 trillion, of which \$10 trillion was held by the 15 largest insurers (Statista, s.a.). The OECD does not provide global asset data in its annual “Global Insurance Market Trends”. PwC reported for 2012 that global insurance companies held assets under management worth \$24.1 trillion. The European Insurance and Occupational Pensions Authority provides data for EU-based insurers.
- Globally, assets under management by SWFs have grown rapidly in recent years, topping \$7.2 trillion in 2015, more than double the asset base in 2008 (Sovereign Wealth Fund Institute, 2016). Although the biggest SWFs are in Europe, Asia and the Middle East, African SWFs have continued to grow in recent years (Hove, 2016). In 2009, assets under African SWF management were estimated at \$114.27 billion but increased to about \$159 billion in 2014. They are expected to grow further as more countries prepare to set up their own SWFs.

	2012	2020
Pension funds	33.9	56.5
Insurance companies	24.1	35.1
Sovereign wealth funds	5.2	8.9
Total, long-term institutions	62.2	100.5
Source: PwC (s.a.)		

Ignoring valuation changes, the rise projected for the three groups of institutional investors translates into annual asset additions worth \$4.78 trillion per year on average. **To fill Africa’s annual infrastructure funding gap of \$50 billion, 1 per cent of new institutional investment by pension funds, life insurance companies and SWFs would need to be invested in Africa’s infrastructure every year.**

Just like data on total assets of institutional investors, the share of these assets invested in infrastructure remains very sketchy.

- Overall investment in infrastructure by pension funds was still limited in 2014 (no later data is available). Total assets under management of large pension funds from which data was received comprised 77 funds for \$7.8 trillion; infrastructure investment in the form of unlisted equity and debt considered as direct was \$85.6 billion, representing 1.1 per cent of the total assets under management of the entire survey population. For the 23 funds reporting their infrastructure allocation in the OECD survey over the period 2010-2014, the average unlisted infrastructure equity allocation has stagnated at 3.5 per cent of total assets since 2011 (OECD, 2016a, Figure 7).
- For *insurance companies*, the mean 2014 allocation to infrastructure, as a percentage of assets under management, was 2.2 per cent, with a target allocation reported at 2.8 per cent then (Preqin, 2014).
- Investment in infrastructure projects is the most common route into alternative investment by *SWFs*, with approximately 60 per cent of all of these entities participating in the asset class in 2014 (Preqin, 2016). SWFs invested a total of \$29.1 billion between 2006 and 2013 in the infrastructure sector globally, according to the last (2014) Esade Business School SWF report (Santiso, 2015).⁵ During that period, total SWF assets rose by about \$5 trillion, which implies (bar valuation changes) a percentage share of roughly 6 per cent of new investments allocated to infrastructure.

Until recently, there was limited incentive for institutional investors to leave the comfort zones of liquid, advanced-country securities markets rates of return that could be earned by investing in (rising) bond and equity markets. Trailing five-year real annualized returns were positive for large pension funds for 2010-2014 – a mean return of 5.2 per cent and median return of 5.0 per cent.⁶ In the life insurance sector, real net investment returns averaged 4 per cent in 2014 compared to 2.9 per cent in 2013. Among composite insurance companies, real net investment returns in 2014 were 4.1 per cent compared to 3.2 per cent in 2013 (OECD, 2016b).

Major impediments to larger investments in sustainable infrastructure rest on the regulatory supply side of life insurance companies and pensions funds. Low-income Africa may provide specific challenges to institutional investment (see Section 4), but the data presented here suggest that infrastructure investments by institutional investors have been relatively small in other parts of the world as well.

4 Regulatory supply-side barriers

Apart from the lack of suitably structured assets, pension funds and life insurance companies cite regulatory constraints to explain the low share of infrastructure (and other “alternative”) assets in their portfolios (OECD, 2016a). To understand how regulation may discourage infrastructure investment, it is necessary to know the funding vehicles at the disposal of long-term funds. Direct exposure is gained mainly through the unlisted equity instruments (direct investment in projects and infrastructure funds) and project bonds,

5 SWFs collectively invested \$9.1 billion in ports and airports, \$7.0 billion in water utilities (primarily in the United Kingdom), \$5.5 billion in power distribution grids, \$4 billion in power generation companies and approximately \$3.5 billion in both gas pipelines and transport assets, such as toll roads and railroads.

6 Own calculation based on OECD (2016a, Table 8).

whereas indirect exposure is normally associated with listed equity and corporate debt.⁷ More specifically, options for long-term investors include listed infrastructure companies, private equity funds, pooled infrastructure funds, and debt financing through project bonds or general obligation bonds. As for “green” investments, Berensmann and Lindenberg (2016) observe that these are generally not included in the relevant benchmarks of ratings agencies, as they do not have a sufficient track record to be given a rating.

Pension funds and life insurance companies are subject to prudential regulation to safeguard their balance-sheet liabilities for contributors. Long-term savers desire three features for their investment: a guarantee of paid-in capital to provide financial security; a financial return to maintain living standards in old age; and liquidity to access the funds if unforeseen circumstances arise. Therefore, long-term saving intermediaries are not free to choose their investment pattern but are governed by prudential regulation.

The capital adequacy regimes developed by the European Parliament in the **Solvency II**⁸ directive and the successive Basel accords (currently, **Basel III**), set by the Basel Committee on Banking Supervision, on the supervision of international banks are affecting the ability of pension funds and insurers to invest in longer-term, less liquid assets such as infrastructure and other alternative asset classes. Investment managers of insurers generally accept that Solvency II will lead to a switch-out of public and private equity, infrastructure bonds, property and low-rated corporate bonds (Persaud, 2015).

Thibeault and Wambeke (2014) show, by contrast, that (all-in) capital charges for infrastructure debt under **Solvency II** are generally lower compared to the Basel III standard calibrations. This is due to the combined effect of diversification benefits, asset and liability matching, the loss-absorbing capacity of liabilities and specific risk calibrations, which all benefit insurers by reducing the “all-in” capital charges of insurers (Table 4). The long durations possible in the infrastructure market provide the potential for asset-liability matching, hence a lower interest rate risk capital charge. Note, however, that at low investment-grade ratings (BBB), Solvency II capital charges become more onerous for 20-year-duration infrastructure debt, even compared to standard Basel III charges. **Basel III** has been leading banks to rarely provide loans with a maturity period longer than 10 years. The average maturity period of European infrastructure loans has decreased significantly in the past decade: the maturity period of loans for recent infrastructure projects is seven years, whereas the norm in 2006-2008 was 15 years.⁹

7 Only the largest investors have the capacity to invest directly in infrastructure projects. Pension funds in particular require pooled investment vehicles.

8 The main objective of Solvency II is to protect insurance policyholders and beneficiaries. Solvency II includes quantitative requirements on insurance and reinsurance undertakings to ensure that their financial position allows them to pay the expected insurance benefits and also to bear unexpected losses that they might incur under adverse circumstances. The quantitative requirements include in particular: market-consistent valuation of assets and liabilities, economic determination of own funds and risk-based capital requirements. See European Insurance and Occupational Pensions Authority (2016).

9 Under Solvency II, long-term insurers can benefit from a matching adjustment, an addition to the risk-free rate used to discount liabilities (and therefore reduce them), since they can buy and hold investments to match their liability cash flows. Insurers can take this benefit only if the assets have suitably fixed cash flows.

	Solvency II all-in capital charge	Basel III standard capital charge
AA – 10 years	2.84	2.10
AA – 20 years	1.11	2.10
A – 10 years	3.85	5.25
A – 20 years	2.14	5.25
BBB – 10 years	8.52	8.63
BBB – 20 years	9.28	8.63

Source: Thibeault and Wambeke (2014)

Ultimately, encouraging long-term investment of pension funds and life insurers in infrastructure, including in Africa, will require the G20 to engage in a coordinated dialogue with the regulatory authorities and the FSB. The shift towards mark-to-market accounting and risk management systems based on price volatility such as “value at risk” may be appropriate for continuously traded financial assets, but they are counterproductive for long-term institutional investors. As long as regulation distorts demand for financial assets – with liquidity as key requirement – advanced-country government bonds will be preferred over other assets.

The result is a financial market that can be seen by way of concentric circles with government bonds at the centre: eligible for all purposes, central bank refinancing and liquidity coverage; corporate bonds in the next circle, generally priced at a mark-up over government bonds, mostly eligible but with haircuts; equities, alternative investments after this; and far out, the circle of infrastructure investments. (Thimann, 2015)

Current regulation, just as the capital asset pricing model on which it still rests, fails to account for the fact that institutions with different liabilities have different capacities for absorbing different risks. Risk assessments for institutional investors must be based on shortfall risk rather than short-term price volatility.

In addition, most countries have quantitative limits on the investments of *pension funds* as of the end of 2014. Only nine countries in the OECD do not impose any ceiling on pension fund investment: Australia, Belgium, Canada, Ireland, the Netherlands, New Zealand, the United Kingdom and the United States (OECD, 2015). Investment abroad may also only be allowed in selected geographical areas, such as in OECD member countries, the European Union regulated markets or the European Economic Area.

5 Low-income Africa's host barriers

Among the approaches to policy identification and evaluation, the usual “laundry list” approach of Africa’s host problems to attract green infrastructure investment has proven ineffective, given the very large number of potential constraints. An unweighted check-off of selected governance elements thus leads to an undifferentiated diagnosis that fails to target the most severe bottlenecks. The team led by Spratt, Pueyo, Bawakyillenuo and Osiolo (2016) therefore has developed the “green investment diagnostics” framework for the ex-ante selection of areas of policy intervention most likely to remove obstacles to investment in renewable technologies. Their framework has two components: one tests for symptoms of constraints within the economic and financial system generally, whereas the second tests for project-specific issues.¹⁰

As for general barriers, most African countries remain poor, have immature domestic financial markets and have featured deteriorating scores for safety and rule of law.

Because most African countries remain poor, they are not considered creditworthy. Not even South Africa has an investment-grade rating. The African Development Bank (AfDB) has 54 member countries, of which only 17 are not eligible for African Development Fund (AfDF) funding. Most other African countries have a per capita income below an operational cut-off (fiscal year 2015-2016: \$1,215, see Table 5).

Table 5: Eligibility to access AfDF funding (number of countries: out of 54 total)			
Creditworthiness to sustain AfDB financing			
Per capita income above the AfDF/IDA operational cut-off		No	Yes
	No	30 AfDF-only	3 blend-eligible
	Yes	4 AfDF-gap	3 AfDB-only
Source: African Development Bank Group (2015)			

Della Croce, Fuchs and Witte (2016) note that there has been limited progress in developing markets for long-term finance on the continent. Except for South Africa, the depth of equity and bond markets falls far short of the capitalisation and liquidity of financial markets in other developing regions,¹¹ despite recent issuance of Eurobonds and local currency bonds in some places. The largest and most important segment across financial sectors in Africa is the banking system, which is not an ideal source of intermediation for long-term finance, given the maturity transformation of banks’ short-term liabilities and consequent risks.

Governance issues are important for infrastructure sectors everywhere, but they can be particularly pronounced in developing-country settings. Improvement in overall governance in Africa from 2006 to 2015 was held back by a widespread deterioration in the crucial category of “Safety & Rule of Law” – a proxy for the quality of property rights – according

10 Spratt, Pueyo, Bawakyillenuo and Osiolo (2016) examine two of Africa’s better-governed countries: Ghana and Kenya. They find that i) a failure to attract external capital of the form desired, and ii) an inability to transform and allocate domestic capital efficiently as binding constraints in both countries, not – as commonly hypothesised – concerns over political and economic instability, or regulatory or institutional quality.

11 The size and liquidity of African financial markets seem also to hold back SWF investments; see Turkish (2011).

to the “2016 Ibrahim Index of African Governance” (Mo Ibrahim Foundation, 2016). In 2015 a majority of African citizens (64 per cent) lived in countries where safety and rule of law had deteriorated in the last 10 years. Thirty-three countries showed a decline in this category (among them Morocco and South Africa), whereas only 19 registered improvement.

Apart from general barriers, common infrastructure project risks need to be considered in some African countries (Hove, 2016). These include: completion risks (failure to complete the project on time and on budget); performance risks (the risk that the project fails to perform as expected on completion, maybe due to poor design or adoption of inadequate technology); operation and maintenance risks (which relate to costs, management and technical components and obligation to provide a specific level of service); financing risks (which may arise from an increase in inflation, interest rate changes, etc.); and revenue risks (which relate to the possibility of the project not earning sufficient revenues to service its operating costs and debt and leave adequate returns for investors).

A recent discussion paper from Global Economic Governance and Africa/South African Institute of International Affairs (Bertelsmann-Scott, Markowitz, & Parshotam, 2016) takes a closer look at AfDB instruments, especially the AfDF. It finds that “project preparation is a huge bottleneck that limits private financing for infrastructure and delays the AfDB’s own project approval process” (Bertelsmann-Scott et al., 2016, p. 48). It recommends that the AfDB should increase concessional funding towards the project preparation phase. This could be explored through the revitalisation of the AfDF’s existing project preparation facility, which should emphasise mechanisms of cost recovery in order to target the lack of funding that early project preparation receives.

Della Croce et al. (2016) therefore warn to keep perspectives realistic: especially in Africa’s infrastructure sector, an important constraint has proven to be building a pipeline of investible projects, which could form the basis of corporate bond issuances and be suitable for pension funds to invest in. There is a dearth of well-structured, viable projects, inadequate availability of project-structuring skills among local sponsors, and a lack of confidence in the ability, willingness and commitment of governments to fulfil their contractual obligations.

Both papers emphasise that the legal, regulatory and institutional challenges of public–private partnerships (PPPs) should not be underestimated in the context of Africa’s low-income countries. Long-term commitments in the infrastructure sector depend on a set of legal, regulatory and institutional frameworks. From the time of project preparation, to bidding and finally operation, the regulation of PPPs requires an independent regulator and the handling of disputes by an independent judiciary. Other institutional prerequisites are property and collateral registries, reliable accounting and reporting procedures, as well as tested and reliable foreclosure mechanisms. The longer the term of contracts and the larger the funding commitments, the more important such “basic” institutional and legal infrastructure becomes.

Steps	Step 1	Step 2	Step 3	Step 4	Step 5
Major funding source	Government	Step 1 + aid grants + concessionary	Step 2 + banks loans + leveraged private funds	Step 3 + private equity + project bonds	Growing role institutional investors

Source: Based on Della Croce et al. (2016)

To a large extent, long-term funding of infrastructure in Africa is provided, circumventing the intermediation process altogether, including via FDI. Most countries are at the first two steps of the infrastructure funding escalator, outlined in Della Croce et al. (2016). Table 6 provides a simplified model. It shows that a prominent role for institutional investors can only be envisaged towards the end of the infrastructure funding escalator.

A gradual inclusion of institutional investors requires the identification of viable components of infrastructure projects and revenue streams. Supporting these should be the focus of cooperation between institutional investors and DFIs. Examples are user fees for telecommunication fibres, tolls for bridges, ticket prices for public transport systems, and energy or water bills paid by firms or households, which form typical revenue streams for an infrastructure project, provided revenue streams outbalance the costs for operation and maintenance. Then, even with shallow financial markets, a part of the financing can be raised from private sources (Griffith-Jones & Kollatz, 2015). Possible useful instruments for financing infrastructure could be either guarantees from a development bank or co-financing for the later periods of loans.

6 DFI instruments: investment funds, blending and risk mitigation

Beyond conventional aid, the use of a large variety of financial instruments to mobilise private capital is in line with the 2002 Monterrey Consensus on Financing for Development, which advocated support for “private foreign investment in infrastructure development”. As noted by Bilal and Große-Puppenthal (2016), the “EU has especially pushed the blending agenda since 2007 through the creation of regional blending facilities ... approaches have been rather fragmented and different among key stakeholders – EC, EIB, EBRD, AFD, KfW and other EDFI” (Bilal & Große-Puppenthal, 2016, p. 15).

The AfDF, the AfDB’s concessional window, has recently implemented three mechanisms to mobilise additional private-sector finance for LICs: the Partial Risk Guarantee (PRG), the Partial Credit Guarantee (PCG), and the Private Sector Credit Enhancement Facility (PSF). The growing complexity and fragmentation of multilateral development bank (MDB) private-sector mobilisation initiatives seem to be confronted with “little awareness or understanding of these private sector mechanisms and initiatives” (Bertelsmann-Scott et al., 2016, p. 26). New AfDB initiatives have had a low uptake, especially in low-income Africa. Despite their origins in the AfDF, thus far their uptake has been much greater among middle-income countries. The few projects that did use the PRG and PSF facilities were in the energy sector, which is the infrastructure sector most attractive to private investors due to its high returns.

According to Spratt and Ryan Collins (2012), DFIs can potentially create four different forms of impact “additionality”: financial (where they leverage additional private finance into infrastructure); design (where they influence project design so that growth and/or poverty impacts are enhanced); policy (where they influence the policy context in which the project occurs to enhance growth/poverty impacts); and demonstration (where the success of a DFI-supported project provides a stimulus for subsequent private-sector projects that do not involve DFIs. As blended finance is provided on the condition of additionality, the grant element should add benefits that commercial finance would not, or fill a gap where commercial finance would not invest, to ensure that other sustainable finance options are not crowded out.

In infrastructure, direct loans (sometimes syndicated) and loan guarantees have been the traditional key mechanisms used by development banks to support financing. The OECD (2012) gives an overview of financing instruments used by DFIs beyond traditional grants and loans, which are (except guarantees), in principle, included in donors’ reporting on aid and other flows to developing countries. DFI instruments are catalogued under the broad categories of investment funds; blending; and risk-mitigation instruments¹²:

- **Investment funds** are usually set up by DFIs using official sources that are then managed by private companies that invest in funds targeted towards African infrastructure projects. Collective investment vehicles, such as infrastructure funds, are focused on attracting foreign investors, such as pension funds looking for pooled investment vehicles. For example, the AfDB is serving as an implementing agency for the Climate Investment Funds (African Development Bank Group, s.a. “Climate Investment Funds”). Established in 2008 as large, fast-tracked climate-financing instruments, the \$8 billion Climate Investment Funds provide grants, concessional loans, risk-mitigation instruments and equity that leverage significant financing towards achieving low-carbon and climate-resilient development.
- **Blending**, or the use of public funds to de-risk or “leverage” private investments in development, involves combining concessionary financing (grants or loans with a grant element) with debt finance from international financial institutions (mostly, development banks) or market-based sources in order to maximise the volume of resources available for infrastructure projects. Importantly, blended finance is provided on the condition of additionality. This means that the grant element adds benefits that commercial finance would not, or fills a gap where commercial finance would not invest, to ensure that other sustainable finance options are not crowded out but private investment is crowded in. Della Croce et al. (2016) identify debt instruments that are particularly relevant for Africa: project bonds, “green” bonds¹³ and infrastructure bonds (collective investment schemes with infrastructure loans or bonds as underlying assets). Launched in 2015, the PSF is the AfDB credit-enhancement initiative to increase

12 A challenge with analysing and discussing financial instruments is that different actors have adopted different definitions of this concept.

13 Various financial market actors have identified green bonds as a key instrument of climate finance. According to estimations of the Climate Bonds Initiative, a non-governmental organisation that supports the growth of green bond markets, issuance rose to \$81 billion in 2016; see Berensmann and Lindenberg (2016, Box 1: Green Bonds).

private financing in Africa's low-income countries.¹⁴ PPPs are one of the institutional arrangements within which blended finance projects are being implemented. The OECD Development Assistance Committee's "Guidance on Support to Enhance Private Investment in Infrastructure" has called for donors to foster PPPs to enhance the sustainability of infrastructure investments (OECD, 2012).

- **Risk mitigation** is crucial for attracting private investors by assuaging their concerns over potential losses, which are often significant in infrastructure projects. Risk-mitigating instruments include PRGs, PCGs, Political Risk Insurance, Currency Risk Coverage and Export Credit Guarantees. For example, the European Investment Bank aims at increasing private-sector involvement with the African Energy Guarantee Facility. The facility will be structured as a mezzanine portfolio guarantee providing access to risk-mitigation and credit-enhancement solutions for private-sector reinsurance providers. The proposed European Investment Bank facility is designed to reduce economic and regulatory capital consumption. In view of the regulatory supply-side barriers emphasised in Section 2, lowering regulatory capital consumption is an important avenue to unlock institutional investment, especially by insurers and reinsurers. To reduce regulatory capital consumption, MDBs should focus on the initial development of an infrastructure project, assume risk during the most challenging stages of project preparation and would then exit the project by selling debt or equity to institutional investors.

Expectations on the funding potential of blended finance have been set high. The G20 High-level Panel on Infrastructure Investment suggested in 2011 that by "leveraging" the existing capital of MDBs, they should be able to mobilise a multiple of MDB capital from the private sector. For evidence, the G20 pointed to evidence on partial guarantees to have helped MDBs attract from the private sector four to five times the amount (OECD, 2012). The MDBs outlined the key role they can play in mobilising private capital in the context of global challenges by choosing a grandiose title for their report to the Fund/Bank Development Committee: "From Billions to Trillions" (World Bank, 2015). So far, the structure of Africa's external funding is still skewed towards official development assistance (ODA) and FDI (Table 7). Remittances have remained the most important source of Africa's finance (not a capital flow item), amounting to an annual average of \$62 billion.

Table 7: Gross external capital flows to Africa (annual averages, 2012-2014)

	Total*	FDI	ODA	Official credit	DFI mobilised**
\$ billions	215.2	51.1	54.0	18.4	3.5
%	100	23.7	25.1	8.5	1.6

Notes:
 * Includes annual average of remittances of \$62.3 billion, commercial bank credit and minor portfolio flows.
 ** Mobilised from private sector through guarantees, syndicated loans and shares in collective investment vehicles.
 Sources: Benn, Sangaré, Hos and Semarao (2016); African Development Bank, Organisation for Economic Co-operation and Development and United Nations Environment Programme (2016)

14 The PSF's credit enhancement capacity is backed by the liquidity of a reserve pool of €206 million seeded by a grant from the ADF to cover potential losses on payment defaults. The PSF's credit enhancement structure is designed to cover exposures amounting to €620 million (African Development Bank Group, 2016a).

According to the 2015 OECD Survey on mobilisation, \$36.4 billion was mobilised from the private sector in 2012-2014 through official development finance interventions in the form of guarantees, syndicated loans and shares in collective investment vehicles (development-related investment funds). Private finance mobilised through the three instruments was mainly benefiting Africa (29 per cent), although it tends to be underweight in low-income countries. Twenty-nine per cent of \$36.4 billion from 2012 to 2014 translates into an annual average sum of \$3.5 billion in private capital mobilised by official development finance interventions (Table 7). Guarantees were the main leveraging mechanism (59 per cent of the total amount mobilised). Of the total amount mobilised, 19 per cent was climate-related, most of it focusing on climate change mitigation (Benn et al., 2016).

Table 8 shows that private funds mobilised by DFIs seem to have shied away from the “Bottom Billion” (to paraphrase Paul Collier). Within the group of countries attracting blended finance investments, LICs receive much less on a per country basis compared with other developing countries (Tew & Caio, 2016). LICs obtained, on average, \$60 million in private investment per country between 2012 and 2014; the equivalent figures for other developing countries were six times higher – \$352 million for lower-middle-income countries and \$404 million for upper-middle-income countries. Little of blended finance and FDI goes to low-income countries compared to ODA, as both categories of private-sector flows seem to favour middle-income countries.

Income group	FDI	ODA	DFI mobilised
Low income	4	30	5
Lower MIC	22	43	51
Upper MIC	70	47	19

Note: * Data for country-allocable investments only; residual went to high-income group.
Source: OECD (2016c)

Despite policy efforts to mobilise private finance through official development finance interventions, they so far have represented a small fraction of the flows directed to low-income Africa. As the OECD Development Assistance Committee (2016) has noted: “While the concept of blending public and private finance in the context of development co-operation is nothing new, it has played a marginal role so far.”

7 Prudent insights and policy conclusions

In the context of low-income Africa, the potential of private funding by long-term investors that is mobilised by blending and other instruments to fund sustainable infrastructure is easily oversold (e.g. by the World Economic Forum; see Wilson, 2016). First, there are the high regulatory hurdles – for insurers in particular – to leave the balance-sheet comfort zone of highly liquid OECD government bonds. Second, poor African countries have immature domestic financial markets and have featured deteriorating scores for safety and rule of law. Third, this places the majority of Africa at the lower steps of the infrastructure funding escalator dominated by ODA – quite a

distance from the higher echelons, where institutional investors can play an important role, as even African middle-income countries have low sovereign rating scores. Fourth, notwithstanding more than a decade of G8/G20 promotion, private finance mobilised through official development finance interventions so far represents a small fraction of the flows directed to low-income Africa.

The dilemma is that low domestic savings levels, weak government finances and a low debt tolerance militate against forcing foreign private debt and contingent fiscal liabilities upon countries where infrastructure deficits are most blatant. That dilemma is real, documented by hard empirical evidence. The risk of lasting current account deficits, which are mostly financed privately, is that they tend to end with crises (Cavallo, Eichengreen, & Panizza, 2016). Many African countries have benefited from comprehensive debt restructuring and relief efforts in recent decades, but since 2010 countries have accumulated foreign debt again as raw material prices weakened, growth slowed and concessional debt was replaced (Bertelsmann-Scott et al., 2016). In particular when privately financing large infrastructure projects in immature markets, there is a risk that private returns come at the expense of long-term fiscal costs (contingent liabilities).

Caution needs to be applied with regards to private and public debt sustainability. PPPs are an important vehicle to incentivise private-sector finance. However, their high rate of failure on the African continent underscores the necessity for greater effort on the part of the AfDB to address the capacity gaps in their implementation and ensure that the public sector does not bear all the costs (Della Croce et al., 2016). Avoiding currency (but also other balance-sheet) mismatches are areas where MDBs can help by providing local currency finance to unhedged and vulnerable borrowers. MDBs can provide various forms of credit enhancement, structured finance and hedging solutions to increase the attractiveness of local-currency bond offerings. Contingent liabilities for weak African public budgets that, for example, may arise from PPPs need to be handled from the start of jointly financed projects. The same prudence should pertain to China's infrastructure financing in Africa through the China Exim Bank and other Chinese policy banks, to be sure. Both investors and Africa's governments should consult the Joint World Bank-IMF Debt Sustainability Framework for Low-Income Countries (IMF, 2017) before raising the finance they need to meet the SDGs, including through grants when the ability to service debt is limited. According to the IMF (2016), "debt sustainability assessments have deteriorated in a number of Africa's countries; the sources of debt increases vary, but public infrastructure investments appear to be a common denominator".

Stimulus for foreign inflows must go hand in hand with financial discipline. Issuing short-term foreign-currency bonds to bridge financing gaps is risky. Debt-creating financial flows have time and again been shown to be inferior to FDI, which in turn has been associated with higher gross domestic product (GDP) growth (Reisen & Soto, 2001).

The following main policy conclusions can be derived from Part 1:

1. A structured dialogue needs to be initiated between prudential regulators of savings institutions and development partners to remove prudential barriers to institutional investment in Africa.
2. Cooperation between institutional investors and development finance institutions needs to identify viable components of infrastructure projects and revenue streams.

3. Contingent liabilities for weak African public budgets that may arise from public–private partnerships should be handled from the start of jointly financed projects. In fragile and conflict-affected low-income countries, official grant aid will continue to be indispensable.
4. Local currency finance to unhedged and vulnerable borrowers should be provided by multilateral development banks to avoid currency mismatches.
5. Various forms of credit enhancement, structured finance and hedging solutions should be provided by multilateral development banks to increase the attractiveness of local-currency bond offerings.

Part 2

Foreign direct investment in Africa: structural transformation and higher employment

1 Introduction

Since the mid-1990s African countries have been experiencing a period of increased GDP growth and real GDP per capita growth. FDI inflows into Africa have also increased due to large reserves of oil, gas, metals, gold, and diamonds; growing African markets; and the purchasing power of a growing middle classes. This long period of high growth is usually explained by the commodity boom and the structural changes of FDI. Africa experienced a commodity “super cycle” that lasted until 2014, with China simultaneously boosting prices and demand. Africa’s performance and competitiveness has also improved, although it continues to lag behind other continents. Moreover, Africa is diversifying, the digital transformation is fast, and many African enterprises have started to integrate themselves into regional value chains (RVCs) and global value chains (GVCs). For a very long time, Africa’s FDI inflows and growth were centred on abundant natural resources and capital-intensive sectors. However, the structure of FDI is starting to change. More investment in services, construction and consumer sectors indicate a discreet shift to more labour-intensive industries.

This paper deals with the question of how much FDI inflows into Africa have influenced structural change and whether they create employment and, thus, add to (inclusive) growth. First, we reveal FDI-inflow, growth- and employment-creation trends. Second, we identify the reasons for changes in these trends. Many studies have shown that a country’s regulatory regime is an important criterion for FDI inflows. We further discuss additional drivers. In particular, we show that urbanisation, industrial clusters, integration into RVCs and GVCs, and linkages between foreign multinationals and small and medium-sized enterprises (SMEs) are of major importance.

This part is organised as follows: Section 2 provides a literature review that focuses on the question of how FDI spurs growth and inclusiveness. Section 3 reviews new trends and shows that FDI inflows into Africa have changed, indicating a structural transformation in Africa. Section 4 analyses trends with regard to resource inflows, service and manufacturing investment, and the role cities and value chains play. Section 5 deals with the economic policies of African countries and answers the question of how Africa can better utilise its potentials and reap more benefits from FDI inflows.

2 African growth dynamics and structural transformation

Economic points of departure vary drastically from country to country – for example, between coastal and landlocked countries and between resource-rich and resource-poor countries. One determining factor of a country’s performance is the introduction of economic policy reforms. There are some states that have remained fragile, such as Burundi, The Gambia, Somalia, the Democratic Republic of Congo and various Sahel countries.

Countries such as Nigeria and South Africa demonstrate a high level of urbanisation, where more than 60 per cent of the population live in cities, whereas countries such as Kenya and Uganda have overwhelmingly rural populations. There are also some industrialised countries, such as South Africa and Mauritius and many others, with very small manufacturing sectors.

Economic growth varies from country to country. African countries have been affected differently by the new external environment (characterised by lower commodity prices and demand for commodities). For instance, growth among non-renewable commodity exporters has shifted downwards to a median growth rate of 3.2 per cent (2015), whereas non-resource-intensive countries such as Kenya, Cote d'Ivoire and Ethiopia have continued their strong growth momentum (IMF, 2016). Using the growth acceleration criteria laid out by Hausmann, Pritchett and Rodrik (2005),¹⁵ sustainable growth can be established for some countries; however, such sustainability cannot always be applied to fragile states and low-income states, meaning that about only half of African countries are experiencing accelerated growth. Many African countries have also been able to realise high growth rates in exports, sometimes even surpassing the worldwide average. Many took advantage of the price increases of natural resources and the rising demand for both natural resources and energy on the parts of India and China (African Development Bank et al., 2016).

Numerous countries on the African continent were able to solidify their positions as suppliers of minerals, oil and gas, but Africa's share of their exports of manufactured goods is especially low, having sunk even from 1.6 per cent in 1980 to 0.8 per cent in 2010. Less than 4 per cent of the population is employed in the African manufacturing industry. The share of manufacturing value added in GDP decreased between 1991 (about 13 per cent) and 2015 (about 10 per cent). Most African countries have been unable to further industrialise as many advanced and developing countries; in fact, they have de-industrialised (Bhorat & Tarp, 2016). However, there has been an upward trend in manufacturing, which has seen manufacturing value added double over the past four decades: from \$73 billion to \$157 billion (in 2014) (Balchin et al., 2016).

After a decade of high growth, larger sections of the continent's population enjoy a slightly higher standard of living. The same applies to Africa's middle class, which, although still small, has grown in some countries during the last decade in the context of growing urbanisation and the continuous growth of income. This middle class is primarily characterised by altered consumer behaviour and other consumption patterns, such as the amount of money spent on qualitatively better consumer products, education and health.

Some authors argue that Africa's transformation has increased the likelihood of sustained growth and increased performance. Such a transformation involves the movement of labour from low-productivity into higher-productivity sectors. Various researchers (Rodrik, 2016; McMillan, Rodrik, & Verduzco-Gallo, 2014; Timmer, de Vries, & de Vries, 2014; de Vries, Timmer, & de Vries, 2015) contend that high growth rates are not necessarily accompanied by a structural transformation towards a modern economy, resulting in the creation of jobs in the industry sector, or increases in income. On the contrary, in many African countries

15 Hausmann et al. (2005, p. 2) define a "growth acceleration" as "an increase in per capita growth of 2 percentage points or more [...]. To qualify as an acceleration, the increase in growth has to be sustained for at least eight years and the post-acceleration growth rate has to be at least 3.5 percent per year."

migrating agricultural labourers are employed in the low-productivity services sector and the informal urban sector. Many countries have resource sectors (oil, iron ore) with very high productivity that do not absorb much labour. In short, Africa is characterised by three main trajectories: (1) resource dependence with a capital-intensive form of production and limited employment generation, (2) small manufacturing sector and, in many countries, de-industrialisation and (3) informal labour in the services sector. This dynamic reveals a tendency not only towards large capital-intensive companies but also towards microenterprises in the low-productivity, traditionally labour-intensive informal sector and the existence of only a small medium-sized enterprise sector (Gelb, Meyer, & Ramachandran, 2014; Kappel, 2016).

Most countries in Africa have been unable to successfully industrialise¹⁶ and significantly increase their industrial employment levels due to changed rules for economic growth brought about by global competition, rapid technological change and global shifts in demand towards services. This means that the development prospects of African firms are limited because African enterprises are less productive than those from China and other emerging countries. Even their use of the latest technologies, which – in principle – could bring about an industrialisation process, is limited. Many researchers hold the view that most African countries are caught in a resource trap (Venables, 2016) and a trap of “unlimited supply of labour” (Lewis, 1954).

The new debates regarding Africa focus on these issues and try to support policies based on inclusive and green FDI, and industrialisation (United Nations Economic Commission for Africa & African Union, 2014; African Development Bank, 2016). Industrialisation is regarded to create new jobs. Many institutions, for example the World Bank and the AfDB, therefore focus their strategies on eliminating high trade and transport costs, expanding markets, raising economies of scale and improving access to finance. Others deal with favouritism, corruption, regulation, security and political crises – all of which hinder growth. In this paper, we focus on different aspects. The authors of this discussion paper are aware that the level of African growth is too small to tackle unemployment, especially youth unemployment. We agree that the elimination of constraints on enterprises will foster growth. However, other factors are important as well. For instance, rural migration, the modernisation of agrarian societies, market expansion, urbanisation and growing middle classes all bring about huge changes. The integration of African countries into GVCs and RVCs, industrial clusters and special economic zones (SEZs) (Altenburg & Lütkenhorst, 2015; Bhorat & Tarp, 2016), as well as the rise of non-resource FDI, are indications that Africa is capable of transforming from an agricultural society into a market society based on industrialisation and innovative entrepreneurship.

16 Rodrik (2016) characterised these developments as “premature deindustrialisation”, since it means that most developing nations are becoming service economies without having had a proper experience of industrialisation; Stewart (2016).

3 FDI as an accelerator of structural transformation and employment: the debate

There is a body of economic literature that has explored the effects of FDI on growth and structural transformation. In this brief overview, we present those approaches that we consider important for Africa. FDI is defined as cross-border investment by a resident entity in one economy with the objective of obtaining lasting interests in an enterprise in another economy. Resource-seeking, asset-seeking, market-seeking, efficiency-seeking or knowledge-seeking motives are generally what encourage foreign firms to invest in other countries. The impact of FDI on growth occurs through capital accumulation, technology transfer and knowledge spillovers.

FDI can crowd-in local investment, which means that FDI will lead to larger amounts of local investment. Borensztein, De Gregorio and Lee (1998) investigate the effect of FDI on domestic investment, namely, whether there is evidence that the inflow of foreign capital “crowds out” domestic investment. In principle, Borensztein et al. (1998) figured out that FDI may support the expansion of domestic firms through complementarity in production or by increasing productivity through the spillover of advanced technology. The authors find some evidence of crowding-in effects, leading them to conclude that countries with a more educated workforce are better equipped to take advantage of any advanced technologies gained as a result of FDI. For them, it appears that the main channel through which FDI contributes to economic growth is by stimulating technological progress, rather than by increasing total capital accumulation in the host economy.

Alfaro and Charlton (2007) find that the effects on growth depend on the sector through which FDI enters the host country. They conclude that FDI into (i) the manufacturing sector contributes to growth, (ii) the primary sector has a negative impact on growth and (iii) the services sector has ambiguous results. Adams (2009) emphasises that FDI contributes to growth by augmenting domestic capital and by enhancing technology through the transfer of skills, knowledge and technology. Aizenman, Jinjark and Park (2013) find a large positive and robust relationship between FDI and growth. The positive effects of FDI can take several forms (Loungani & Razin, 2001). For example, FDI facilitates the transfer of technology that cannot be achieved through trade in goods and services. Moreover, FDI can also promote competition in the domestic input market and boost integration into RVCs and GVCs. In addition, because foreign multinationals often offer employee training in the course of operating new businesses, FDI contributes to human capital development in the host country, whereas the profits generated by FDI contribute to corporate tax revenues. However, Lean and Tan (2011) indicate that domestic investment is a more important source of growth than FDI because it is an effective instrument of job creation for the economy.

Other studies show that the effect of FDI inflows is related to a country’s financial and absorptive capacity. Durham (2004) demonstrates that the absorptive capacity of the host nation is strongly related to human capital endowments. Alfaro, Chanda, Kalemli-Ozcan and Sayek (2004) assert that only countries with well-developed financial systems experience positive growth effects from FDI. Also of importance is whether foreign multinationals cooperate with local firms in order to raise their capabilities to qualified supplier status, thereby increasing local enterprises’ competitiveness (Gereffi, 1999). In special cases, as depicted by Javorcik’s (2004) seminal contribution, lead firms establish

development partnerships with suppliers in non-OECD countries and, if necessary, local research and development (R&D) institutions in order to, for instance, adapt international technologies to the local conditions. Then, in addition to the immediately intended learning and upgrading processes, downgrading, unplanned technological spillover and spin-off effects may occur.¹⁷ However, not in every case do lead firms necessarily intend learning effects along the value chain. Companies at the far end of the chain can acquire skills and knowledge that still belong to the core competencies of the lead firm through demonstration effects and learning by observing. SMEs, however, often have to make specific investments that would be sunken costs if they were outside of the value chain. For the SME, participation in a vertical collaboration essentially depends on a cost-benefit analysis. However, one has to bear in mind that there is a lack of other options, especially for SMEs in non-OECD countries. The criteria for the lead firms to integrate SMEs into a value chain are far less obvious and remain far less researched.

Newman, Rand, Talbot and Tarp (2016, p. 185), in line with Javorcik's study (2004), take a different view, arguing that spillovers are more likely to occur through vertical rather than horizontal linkages. Domestic firms experience positive productive spillovers through their direct linkages with upstream FDI suppliers of input. The origin of foreign investors is also considered to be crucial for the formation of linkages and knowledge spillovers. Amendolagine and Coniglio (2016) examined the differences and similarities between OECD and BRICS (Brazil, Russia, India, China and South Africa) investors with regard to the generation of linkages with domestic firms, knowledge transfer with – and training of – domestic suppliers and buyers, and labour market effects (employment, wages, demand for skilled workers). They find that investors from developed countries more often generate linkages with domestic suppliers than do their counterparts from developing countries. However, at the same time, BRICS countries show a higher propensity to sign long-term contractual agreements – a proxy for more intense collaboration and, thus, the density of knowledge transfer – with domestic suppliers in African countries.

FDI can be harmful if a country's net foreign exchange earnings decrease. Large multinational enterprises often import many of their inputs from abroad. In some cases, their import bills may be higher than their export earnings, resulting in a fall in the country's net foreign exchange earnings. Furthermore, if FDI is geared towards serving domestic markets protected by high-tariff or non-tariff barriers, it may strengthen lobbying efforts to perpetuate any existing misallocation of resources. In addition, a decrease in domestic competition could arise if foreign acquisitions lead to a consolidation of domestic producers.

Research by Farole and Winkler (2014b) shows that greater linkages of African firms to foreign investors are constrained by similar factors, such as insufficient trade and transport infrastructure, regulatory barriers, lack of access to affordable finance, weak skills and management capacity, all of which constrain the competitiveness of domestic firms in Africa in general. A weak legal framework for contract enforcement is an important constraint in sub-Saharan African countries, especially in the agribusiness sector and in mining.

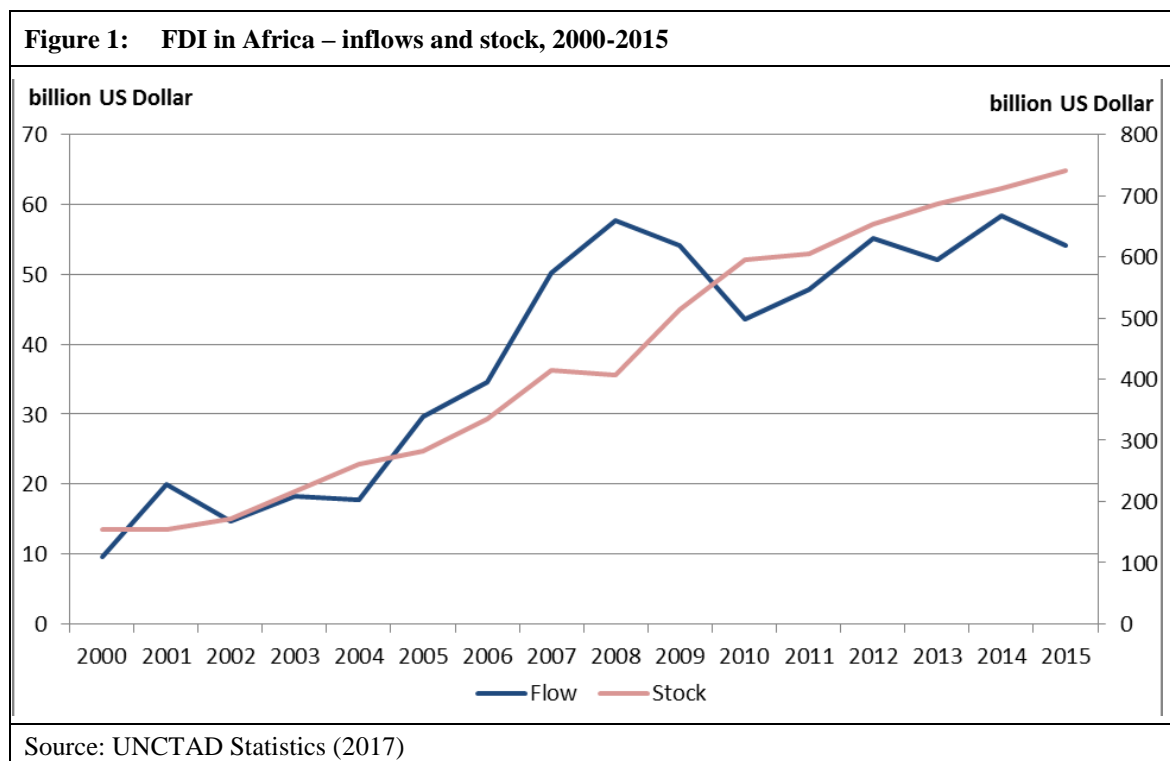
17 In this context, spillover means unplanned learning effects through third actors. Spin-offs mean unplanned, commercially applicable results from R&D work; see Maskell and Malmberg (1999); Krugman (1996); Brach and Kappel (2009).

4 Foreign direct investment in Africa: the trends

4.1 FDI on the rise since the turn of the century

FDI into Africa has been on the rise for 30 years and consists primarily of international and regional investment in the extractive sector, agriculture, infrastructure and consumer-goods industries. While FDI inflows into Africa increased from about \$9.7 billion in 2000 to \$54 billion in 2015, FDI stocks grew from about \$153 billion to \$740 billion (Figure 1 and Table 10). The share of FDI inflows to Africa in world FDI decreased from 4.6 per cent in 2014 to 3.1 per cent in 2015. For comparison, developing Asia had a 30.7 per cent share in world FDI inflows (UNCTAD [United Nations Conference on Trade and Development], 2015).

FDI inflows into Africa over the last three decades have been concentrated in a small group of countries: Angola, Nigeria, South Africa, Sudan and the Republic of Congo. Overall, FDI inflows to Africa increased from about \$10 billion in 2000 to more than \$50 billion in 2015. The drop in FDI inflows in and after 2008 reflects the volatility of these financial flows, which is especially the case given their close relation to the economic situation of world markets. FDI inflows show that Africa is an interesting destination for investors from OECD countries, emerging economies and also from inside Africa.

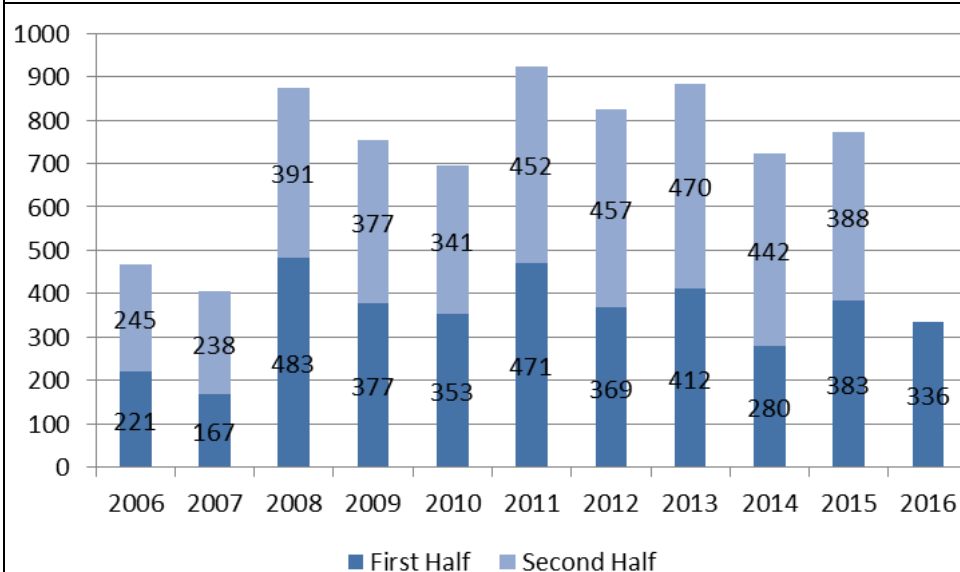


The trend of rising and volatile FDI inflows is also reflected in the number of FDI projects: in 2013 Africa's global share in FDI projects reached 5.7 per cent, its highest level in a decade. While Africa received about 466 FDI projects in 2006, the number first increased until 2008 (874 projects) and then dropped to 774 in 2009 and 694 in 2010. In 2015, the number of FDI projects was 771. The first half of 2016 shows a decline compared to the average half-term level in the years before (Figure 2). The latest data show that company investments in the continent are primarily market-seeking activities,

with more than 50 per cent of projects being motivated by access to domestic markets, and one-third of FDI being driven by proximity to regional markets and consumers (African Development Bank et al., 2016).

In 2015, southern Africa gained the largest share of FDI projects (28 per cent), closely followed by East Africa (26 per cent). Kenya is the most important FDI host country in East Africa and the second-largest FDI recipient after South Africa. Morocco and Egypt are the most important destination countries of FDI projects in North Africa. In terms of FDI value in 2015, West Africa is leading across Africa (30 per cent), followed by North Africa (29 per cent) (Table 9).

Figure 2: FDI projects in Africa, 2006-2016



Source: EY (2016a)

Table 9: Top 10 recipient countries of FDI projects, 2015

		No. of projects	Share in %
1	South Africa	130	16.9
2	Kenya	95	12.3
3	Morocco	74	9.6
4	Egypt	66	8.6
5	Nigeria	53	6.9
6	Ghana	41	5.3
7	Mozambique	32	4.2
8	Ethiopia	30	3.9
9	Cote d'Ivoire	28	3.6
10	Uganda	24	3.1

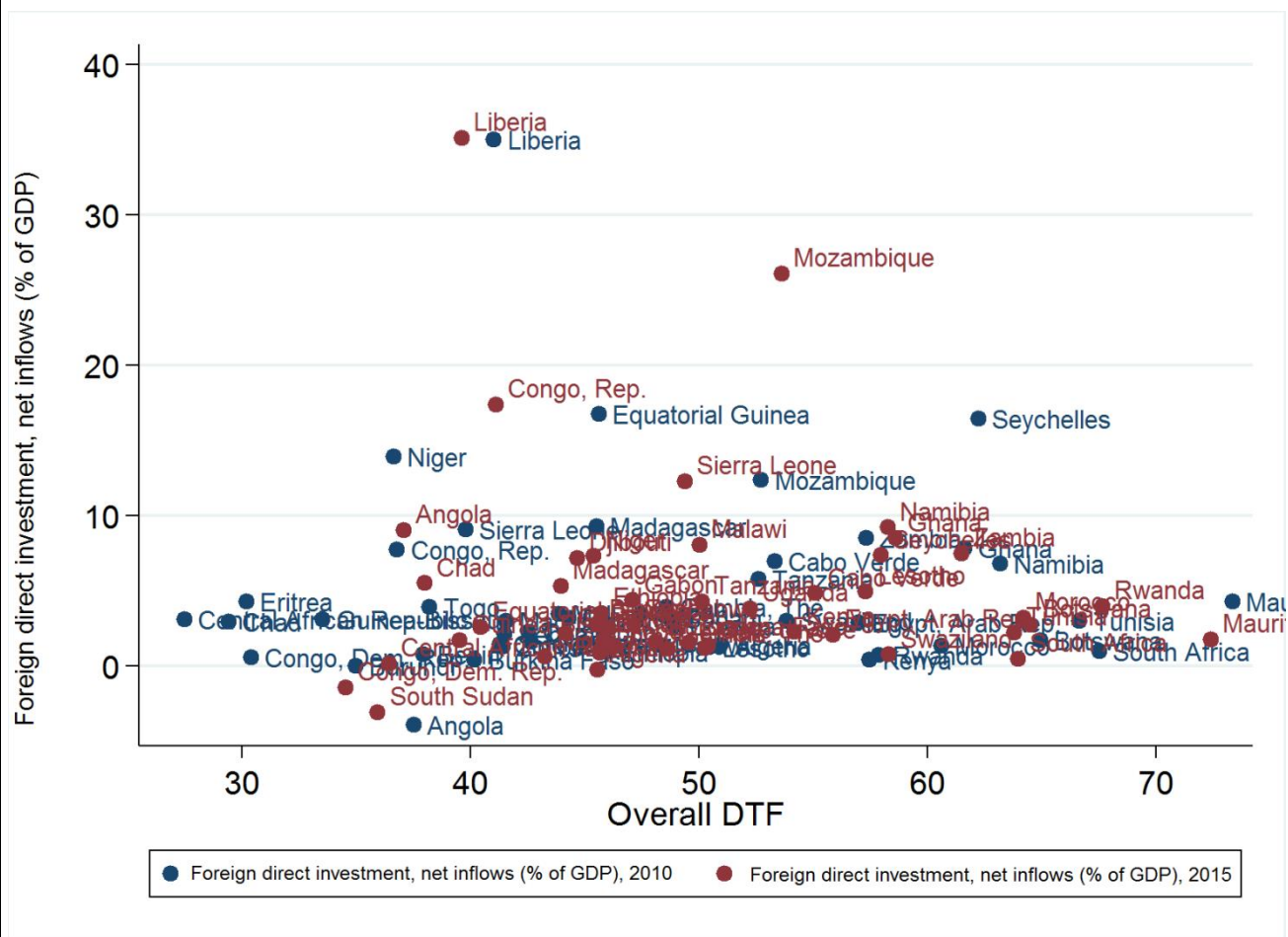
Source: Authors, based on EY (2016b, data source: fDi Markets)

Africa's growth performance over the past 15 years has attracted higher FDI inflows, but some countries receive no or little FDI, such as Burundi, Eritrea and other fragile or

conflict countries. Overall, FDI trends and country attractiveness (in terms of governance, diversification, infrastructure, business enablement and human development) are not simple correlates, as a study by EY (2016c) shows. Based on an Africa investment attractiveness matrix, the authors of this discussion paper show that there is indeed a strong correlation between FDI project numbers and value and the Africa Attractiveness Index (AAI) for South Africa, Egypt and Morocco. However, Botswana, Mauritius and Rwanda are also among the AAI's top 10 but are not among the top 10 in terms of FDI projects. The AAI captures resilience in the face of macroeconomic pressures as well as progress being made in governance, diversification, infrastructure, business enablement and human development. Angola, Algeria and Mozambique perform well in terms of FDI capital value but not in the AAI. This implies that other drivers, such as natural resources and geographic location, are more often relevant in driving FDI flows into Africa. The missing link between the business environment and FDI inflows for most African countries is also shown by a simple correlation of FDI as a percentage of GDP as well as the distance to frontier (DTF) measure provided by the World Bank (2017) (Figure 3). This measure determines the absolute level of regulatory performance based on the World Bank's Doing Business data over time.

Figure 3 highlights that Liberia is the only country with high inflows of FDI (in the iron ore sector) as a share of GDP and a relative low overall DTF due to a combination of large FDI inflows to resource-intensive sectors and a very low level of GDP. Most countries have FDI inflows below 10 per cent of GDP, whereas the DTF ranges from below 30 to more than 70 per cent. South Africa and Mauritius, both leading countries in terms of DTF, have FDI inflows in terms of GDP that are under 5 per cent. The Republic of Seychelles is one of the most attractive countries in terms of FDI inflows as a share of GDP and has a relative high DTF.

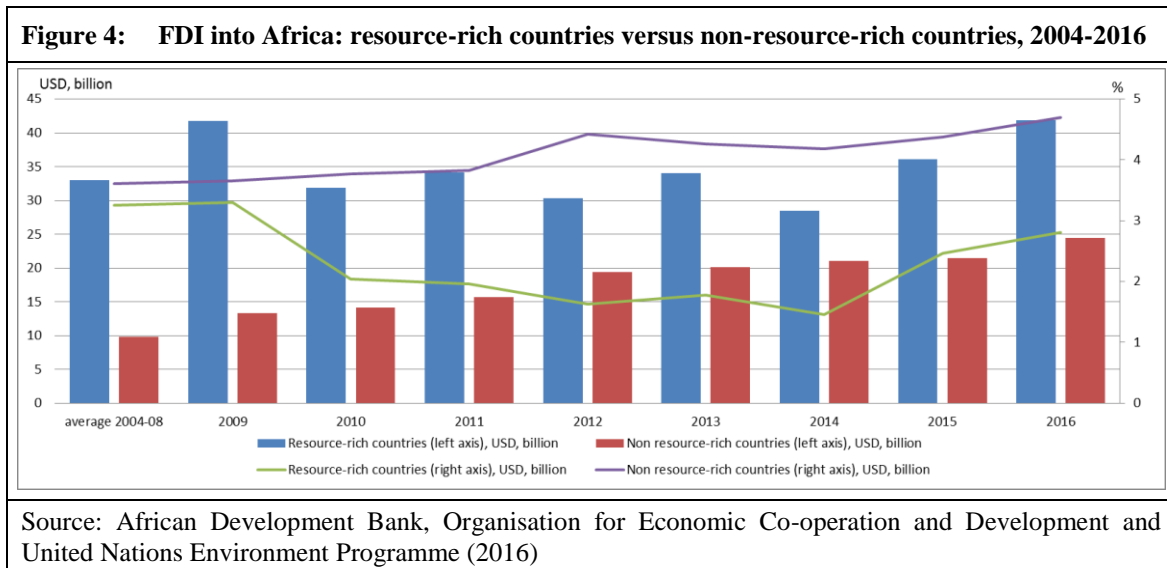
Figure 3: Correlation of FDI (in %) of GDP and DTF, 2010 and 2015



Source: Own compilation based on data from World Bank (2017)

4.2 A gradual shift from resource-driven FDI to FDI in consumer sectors

Although mineral-rich countries remain the principal destination for investment flows, non-resource-rich countries increasingly account for a larger share of FDI. According to the IMF, non-resource-rich countries received an estimated 42 per cent of all FDI in 2014, compared to 19 per cent in 2008. In 2014 the FDI-to-GDP ratio for non-resource-rich countries stood at 4 per cent, twice the level of 2002. Conversely, the ratio for resource-rich countries shrank from 4 per cent to 1.5 per cent during the same period (Figure 4).



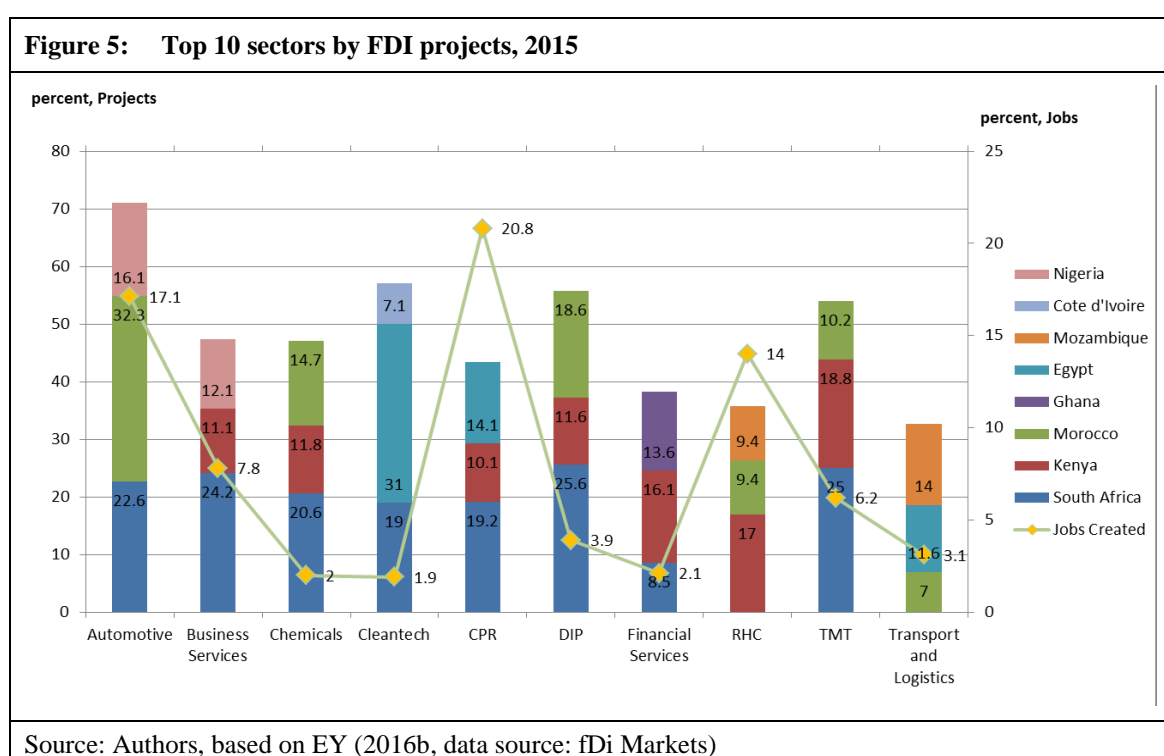
The Hirschman–Herfindahl index for sectoral concentration indicates that FDI flows into Africa are starting to diversify into consumer-goods industries, including ICT, retail, food and financial services. In 2013 the index was at its lowest level in a decade, averaging 0.1, compared to 0.43 in 2003.

This trend is also confirmed by data on announced greenfield projects. In 2013/2014 manufacturing and services accounted for about 85 per cent of the total value of projects in Africa (fDi Markets, 2015). In 2015 some 38 per cent of announced greenfield FDI projects and 33 per cent of related capital expenditure were in manufacturing. The importance of FDI in services can be seen in announced greenfield investment data: the services sector accounted for 60 per cent (2015) of projects and 43 per cent of capital expenditure. Large investments took place in manufacturing in Africa, mainly in electronic equipment and motor vehicles. At the same time, the share of jobs created by FDI in consumer-oriented industries – although very volatile over time – increased from 17 per cent in 2005 to 29 per cent in 2015. In contrast, the share of jobs in the extractive industries decreased from about 27 per cent in 2005 to 14 per cent in 2015 (EY, 2016b).

Figure 5 gives an overview of the top 10 sectors according to the number of FDI projects across Africa in 2015. The automotive sector is dominated by projects in South Africa (23 per cent), Morocco (32 per cent) and Nigeria (16 per cent), accounting for more than 70 per cent of all projects in Africa. The largest share of FDI projects is accomplished in South Africa in business services, chemicals, consumer products and retail (CPR), diversified industrial products (DIP), and technology, media and telecommunication

(TMT). Clean technology FDI projects are most widespread in Egypt (31 per cent). The financial sector, real estate, hospitality, and construction (RHC) as well as transport and logistics are more diversified in terms of FDI projects. Compared to consumer-oriented industries, capital expenditure of extractive FDI projects is much higher. However, the gap has decreased over time, from 51 per cent to 17 per cent (EY, 2016b). This drop in capital investment may be attributed to changes in the economic structure of several African countries. Figure 5 also shows that jobs were mainly created in CPR (21 per cent), the automotive sector (17 per cent) and RHC (14 per cent).

Increasing investments in clean technology in Africa reflect the continent’s abundant solar, wind and geothermal resources. Overall, in 2015 Africa received capital investments in alternative and renewable energy projects of about \$12.2 billion, compared to \$9.9 billion in 2014 (fDi Markets, 2015). The 2015 value is only 39 per cent smaller than investments in coal, oil and natural gas.



Investors from both emerging markets and industrialised countries are looking for lower-cost environments in which to do business in order to maintain the competitiveness of their global production networks. Rising wages in emerging markets’ manufacturing industries and services sectors have presented Africa with a window of opportunity for them to catch-up their industries. Enterprises from China, Indonesia, Turkey and India have started to invest in labour-intensive industries in Africa, which have the benefit of low minimum wages in some countries. At the same time, some African countries – such as Kenya, Egypt, Ethiopia, Zambia and South Africa – started to foster structural transformation by pushing their economies towards industrialisation, mainly through manufacturing in special economic zones. The development of SEZs is intended to reduce logistics costs and the high costs of doing business. As of 2015, many African countries have SEZ programmes, and many others are in the process of developing them. The vast majority of African zones are traditional export-processing zones and industrial parks, some

of which are run by Chinese investors. In Ethiopia, for example, there are industrial zones in the vicinity of Addis Ababa that are used for export sectors, including garment and footwear industries and industrial zones for local and foreign investors (e.g. China, India, South Africa, Turkey and Egypt) promising to engage in export sectors. With the exception of Mauritius and the partial initial successes of Kenya, Madagascar and Lesotho, most African zones have failed to attract significant investment, promote exports and create sustainable employment. No country except Mauritius has managed to use economic zones to support a successful process of structural transformation and integrate SEZs into the rest of the economy.

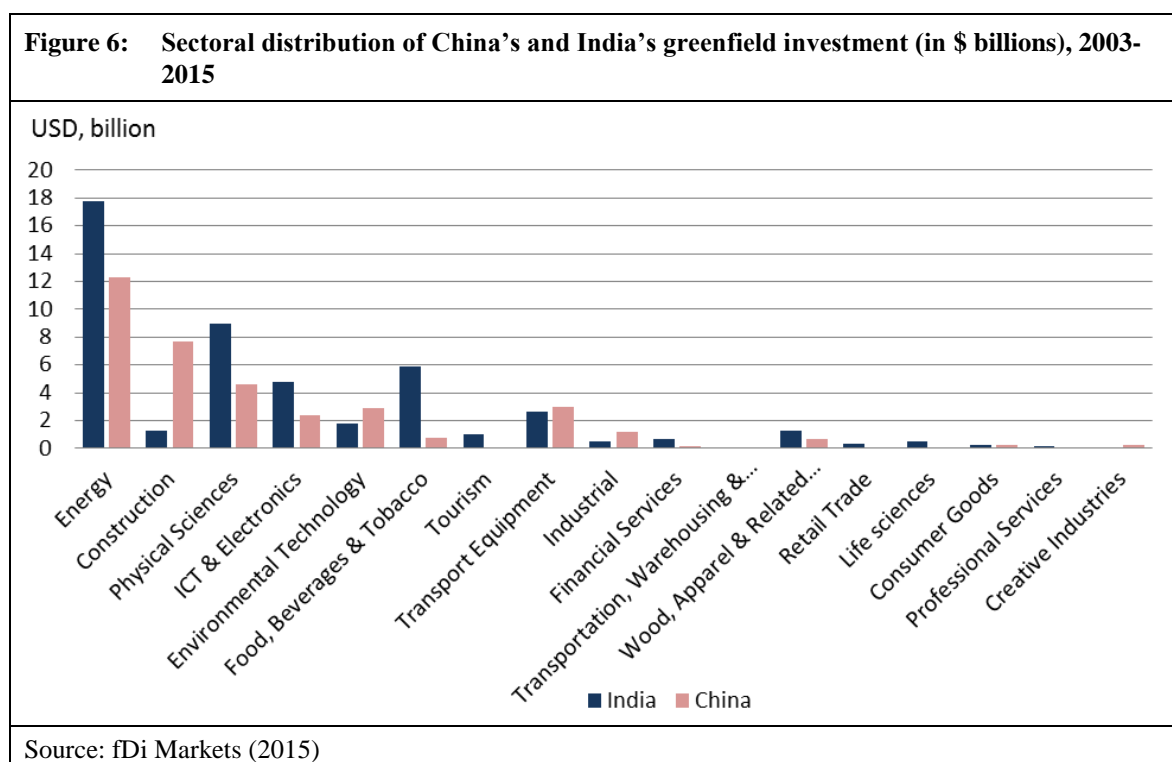
China and other emerging economies gave a major boost to FDI in Africa. China, South Africa, India and Malaysia were among the top 10 investors in terms of FDI stocks in Africa in 2015 (UNCTAD, 2015). In 2015, China accounted for 3 per cent of greenfield investments with 27 projects (32 in 2014), and also was among the top 10 investors in Africa in terms of FDI projects. Leading investors were the United States (96 projects), the United Kingdom (77), France (58) and the United Arab Emirates (50 projects). Germany, as one of the most important countries of origin for FDI in Africa, had 38 projects in 2015. Average annual German investment between 2010 and 2015 added up to \$2.2 billion (Tables 10 and 11). India's greenfield activities are on the rise, with a share of 6 per cent of all greenfield projects in 2015 (32 projects). China's and India's investments (Figure 6) indicate that their FDI in energy dominates, followed by investment in construction, physical science, ICT, environmental technology, and food and beverages. For example, China's investment in Nigeria shows a growing trend towards manufacturing. The investments reflect typical entry-level industries: furniture, building materials, plastics, food processing and vehicle assembly. Most of these industries cater to the domestic Nigerian market and its large and growing middle-class consumer base, though some (that is automobiles) are potentially looking to expand to export markets (Chen, Sun, Ukajiofo, Xiaoyang, & Brautigam, 2016).

Table 10: Stock of FDI in Africa, by origin (\$ billions)		
	2009	2015
United Kingdom	48	66
United States	44	64
France	49	52
China	9	32
South Africa	16	26
Italy	10	19
Singapore	13	17
India	12	15
Malaysia	16	14
Germany	9	13
Total	595	740
Source: UNCTAD (2016)		

Table 11: Greenfield investment flows to Africa, 2010-2015 (\$ millions)

	2010	2011	2012	2013	2014	2015	Average 2010-2015
United States	4,930	6,234	4,759	3,978	7,867	6,897	5,778
EU total	28,759	20,406	8,255	19,753	47,119	27,763	25,343
United Kingdom	11,699	8,260	2,704	4,815	2,563	4,934	5,829
France	7,239	2,331	1,567	2,627	18,941	5,829	6,422
Italy	486	3,048	578	918	323	7,444	2,133
Spain	1,330	911	678	3,636	917	902	1,396
Germany	3,128	2,587	1,067	1,195	2,652	2,607	2,206
BRICS – total	9,709	16,196	10,709	12,942	12,202	9,675	11,906
Brazil	800	1,159	26	36	70	336	404
Russia	93	708	50	1,678	82	4,027	1,106
India	4,562	7,870	7,514	5,331	1,122	981	4,563
China	834	1,791	1,820	292	6,131	2,313	2,196
South Africa	3,419	4,667	1,299	5,605	4,800	2,018	3,635
Total	70,449	67,551	47,249	66,299	88,391	71,181	68,521

Source: fDi Markets (2016)



Whether African economies take advantage of these opportunities or adequately deal with the challenges generated by lower commodity prices depends on comparative advantages, the quality of economic policy and the fast implementation of measures. Recent developments make it clear that a substantial shift is taking place, meaning that Africa can no longer be seen as the continent of commodities.

In sum, many resource-poor countries continue to experience high FDI inflows, robust growth and high employment in more productive sectors. Using a panel of 48 sub-Saharan African countries from 1991 to 2009, a study by Mayom (2015) shows a positive and significant effect of FDI on employment. Growing investments in the production of clothing, textiles and food – albeit low-tech sectors – indicate a major change. FDI inflows into a growing secondary sector as well as those flows into motor vehicles, manufacturing and mineral products make it clear that some African countries have moved away from entirely commodity- and agrarian-based sectors. Most FDI provides employment for low-skilled workers, although some also offers opportunities to skilled workers. FDI in mid-technology sectors or even higher technology (e.g. manufacturing of motor vehicles, electrical machinery and plastic products) is not a regular occurrence (except in Mauritius and South Africa), but this use of FDI shows that some countries have climbed up the technological ladder.

4.3 Urban agglomerations become main hubs of investment

Although most African countries are still in the early stages of urbanisation – in Ethiopia, for example, only 20 per cent of the population is urbanised – the continent is rapidly urbanising. In fact, it is the most important structural transformation underway on the continent. Cities can drive economic development and, in turn, rapidly lift societies out of mass poverty, but Africa’s fast urban growth contrasts with the slow pace of structural transformation. There are concerns that African countries have skipped an industrialisation stage and have moved into the services sector too early (Rodrik, 2016). For instance, African growth has not been proportionally matched by formal employment creation. Thus, most male and female workers have stayed in the informal services sector, working as street vendors and petty traders. Africa’s informal economy is estimated to account for 61 per cent of urban employment and 93 per cent of all new jobs created. Meanwhile, African cities represent a growing consumer market and are being increasingly targeted by investors. Disposable income in Africa’s major cities is expected to grow at an average rate of 6 per cent annually up to 2030, while aggregate spending power is set to more than double, from \$420 billion (in 2013) to \$1 trillion by 2030 (Oxford Economics, 2015). Since the 1980s, Africa’s middle classes have increased threefold, reaching 355 million in 2010 (34 per cent of the population) and are projected to reach 1.1 billion (42 per cent) in 2060 (African Development Bank Group, 2011).¹⁸

In growing cities, there is a greater likelihood that enterprises will grow. Is there a trend towards higher economies of scale, larger SMEs and companies that are technologically more modern and more productive? Companies with high innovation potential could evolve and compete against foreign competitors, whereas small and informal businesses could stay small. In growing cities, there are industrial clusters that enhance information flows and competition between enterprises. Clusters, networks and ties between enterprises represent a new development. In industrial clusters, the conditions for growth and the development of SMEs are evidently better. Clusters and networks between enterprises have a particular significance for the industries. Success is dependent not only

18 According to the report “Dynamics of the Middle Class in Africa” by the African Development Bank Group (2011), people whose consumption is an average of \$2-\$4 per day belong to the middle class (floating class). All those who earn \$4-\$20 per day form the core of the new middle classes in Africa.

on the productivity levels of individual enterprises but also on the interactions between many vertically and horizontally linked enterprises.¹⁹ The cluster concept assumes that the increasing complexities of products and services are giving rise to geographical and sectoral functional clusters. Successful enterprises are integrated into cooperation and innovation milieus. Learning processes are fostered and raise the collective efficiency levels of companies (Schmitz, 2004). Thus, in clusters there is the possibility to grow faster and become more productive and innovative. In particular for SMEs, clusters offer good conditions for steady and continued growth. Important knowledge transfers primarily occur across industries. In urban agglomerations, the diversity of the industrial mix enables access to services, large specialised labour pools, information transfers and infrastructure.

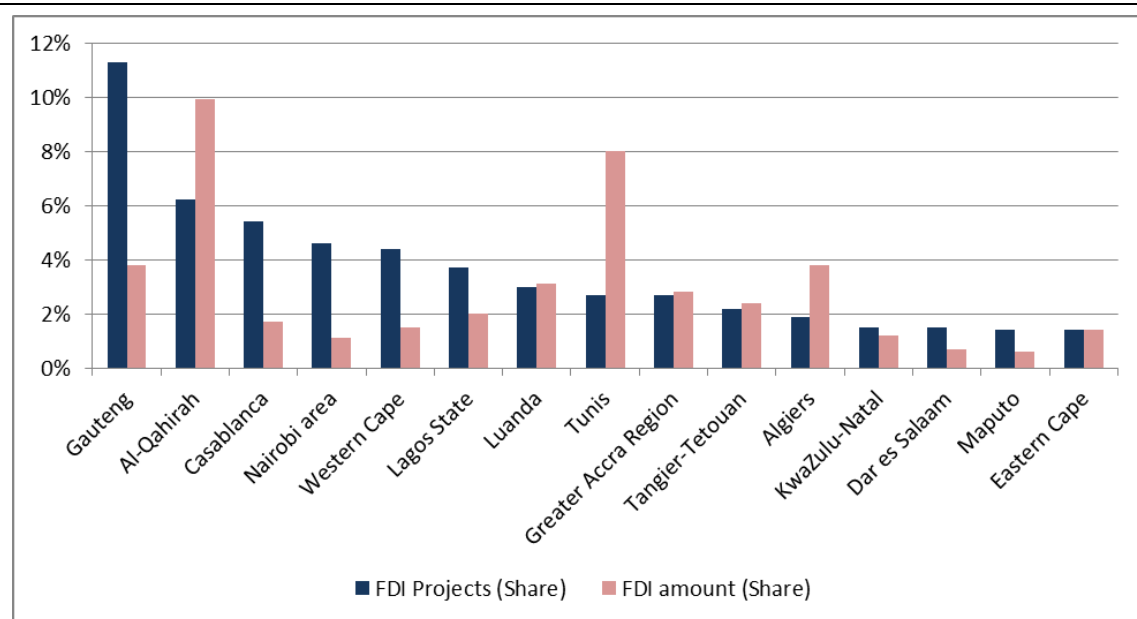
The most important sub-Saharan cities for investors are Johannesburg, Cape Town, Nairobi and Lagos (in that order). Casablanca, Cairo and Tunis are considered to be the top three cities to invest into in North Africa (EY, 2014). This ranking reflects the current quality of the business climate, infrastructure and the availability of a skilled workforce.

EY (2014), Wall (2016, 2017) and the African Development Bank, the Organisation for Economic Co-operation and Development and United Nations Environment Programme (2016) use available data to identify the top 15 African clusters by FDI projects between 2007 and 2013 (Figure 7).²⁰ Gauteng, the home of Johannesburg and Pretoria, is the most important FDI destination in southern Africa. Most FDI projects are related to TMT, business services and financial services. In West Africa, Lagos and Greater Accra receive the largest share of FDI projects. These projects mainly target TMT, RCP and the financial services sectors. Nairobi and Dar es Salaam are the major destinations of FDI projects in East Africa. In North Africa, the Cairo Area, the Al-Qahirah area surrounding Cairo, Casablanca in Morocco, and Tunis in Tunisia account for the largest share of FDI projects, with Cairo securing \$37 billion and Tunis \$22 billion between 2003 and 2014. Johannesburg and Cairo are Africa's prime global cities. Johannesburg is the number one source city of African FDI (71st globally) but ranks seventh as an FDI destination (104th globally). Cairo is ranked second in terms of FDI source and first in terms of destination.

Clusters are of importance to a city. Africa has four major city clusters, which are referred to as "FDI corridors": (i) a North African corridor including Casablanca, Tunis and Tripoli; (ii) a Nile corridor including Cairo; (iii) a West African corridor including Lagos, Abuja, Abidjan and Accra; and (iv) a Gauteng-Maputo corridor, which includes Johannesburg, Midrand, Pretoria and Maputo (Wall, 2016). These corridors attract FDI because they are comprised of several primary cities in close proximity to each other and connected through good road and rail networks and port infrastructure.

19 "Horizontal cooperation" refers to cooperation between competitors on the same economic stage who offer similar goods. "Vertical cooperation" involves cooperation between companies operating on different economic stages – for example, cooperation between industry and trade.

20 Detailed data about FDI projects in African cities and provinces is hard to get.

Figure 7: Top 15 African clusters by FDI projects and share in total African FDI projects, 2007-2013

Source: Authors, based on EY (2014, data source: fDi Intelligence)

FDI in Africa's high-tech sector is much more concentrated in fewer highly urban areas – such as clusters around Nairobi, Johannesburg, Port Elizabeth, the West Africa corridor, the North Africa corridor and the Cairo corridor – than it is in other sectors. The quality of infrastructure (road, rail, airports and ports) is the most significant factor with regards to the production of high-tech goods and the distribution thereof.

Among all the jobs directly created by FDI in Africa between 2003 and 2014, 83 per cent were located in cities. Over the same period, FDI in manufacturing is estimated to have directly created more than 646,000 jobs; FDI in services, 281,000 jobs; FDI in high-tech, 159,000 jobs; and FDI in resources (or non-urban FDI), 220,000 jobs (Wall, 2016). Although urbanisation can help to accelerate social development, FDI in urban centres brings knowledge and technology and creates employment. FDI in cities is strategically important for developing the necessary urban base in the manufacturing and services sectors, which could drive Africa's structural transformation. However, the growth-enhancing effect of FDI stems mainly from the productivity spillover to domestic firms rather than from direct employment by FDI firms. The agglomeration economies resulting from industries locating themselves in a given area are higher in Africa in cases where domestic firms have located themselves close to foreign multinationals, especially those coming from developing countries (Sanfilippo & Seric, 2014).

4.4 Global and regional value chain investments are on the rise

Recent developments show that African firms are globalising their production in cooperation with international investors. Africa is now actively participating in GVCs and RVCs. Value chains, in particular backward links through local sourcing, appear to offer the most direct channel for gains from FDI spillovers. Depending on the type, value chains can reduce entrepreneurial risks and costs for participants (Table 12).

Table 12: Interaction within a value chain		
Interaction within a value chain	Intentional support of partners: Active, purposeful transfer of knowledge and technologies (usually) by lead firm	Transfer of technology, personnel development, additional training
	Spillover effects: Unplanned, not immediately intended transfer of knowledge and technologies	Learning by observing, learning effects, re-engineering, spin-off products
	Specific investments by the local enterprises in order to facilitate or guarantee close cooperation with lead firm. The prerequisite for this is local firms' trust in the longevity of the value chain. Otherwise it would have <i>sunk costs</i> .	Special machines, tailor-made processes, personnel, locations
Source: Authors		

Despite partially grave asymmetries in the relation between FDI and domestic enterprises, an increasing number of domestic firms are entering into such forms of cooperation. We distinguish between four different types of GVC cooperation models (Gereffi, 2005):

- 1) *Market coordination*: The value chain actors are bound by long-term contracts (arm's-length relationships) between suppliers and producers of end products (lead firms) or short-term purchase-contractual relationships between legally and economically independent firms.
- 2) *Horizontal cooperation*: This is a cooperative, stable relationship between legally independent firms on the same level of market or value creation.
- 3) *Vertical cooperation*: Through transnational value chains, this is the most important form of international integration for African countries. This type of collaboration is characterised in particular by an asymmetrical relationship between a lead firm (typically located in an OECD country, China or an emerging economy) and its suppliers, who produce in African countries. In these cases, legally and economically independent firms form long-term relationships. The value chain partners make relationship-specific investments (technology transfer, special machines).
- 4) *Vertical integration*: Local firms are owned by the lead firm and are, thus, economically and legally dependent.

Where are African countries positioned in GVCs? Sub-Saharan African countries still generally find themselves at the start of their integration process into GVCs (Farole & Winkler, 2014a, 2014b). In fact, their levels of integration have hardly increased since 2000. African exports tend to enter at the very beginning of GVCs (in the form of forward linkages), as a higher share of African exports enter as inputs for other countries' exports, reflecting the still-predominant role of commodities in many countries' exports in the region (Allard et al., 2016). Oil exporters such as Angola and Nigeria are lagging behind and are the least integrated into GVCs. In fact, their GVC-share has decreased, suggesting that diversification has stagnated, or is even falling. A majority of countries have made some progress – especially countries from East Africa and the Southern African Customs Union – even if from very low starting points. They have been integrating into GVCs in manufacturing, textiles and garments, agriculture, transport, tourism and agro-business. Tunisia, Egypt, Morocco, Ethiopia, Lesotho, Kenya, Seychelles, South Africa and Tanzania

have benefitted the most from deeper integration. They built on their comparative advantages, and their business environment was sufficiently conducive. South Africa exhibits stronger GVC integration. This is because South African firms were already quite integrated in the early 1990s and because South Africa's large enterprises made progress as important actors in GVCs. Many South African lead firms were organising value chains in other African countries, mainly in buyer-driven chains (e.g. supermarkets, food and garments).

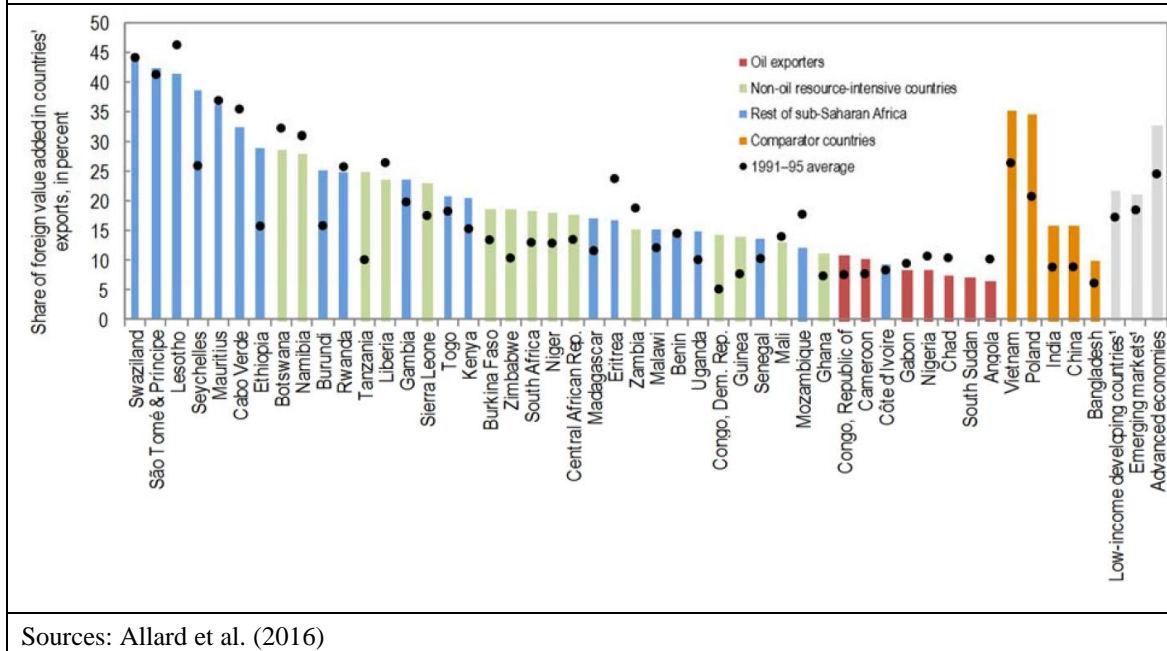
The apparel industries in Swaziland, Lesotho, Mauritius, Kenya and Madagascar (Staritz & Stacey, 2016) are striking examples of how African companies are integrated into GVCs and RVCs. These are hallmarked by backward linkages and subcontracting, market spillover and demonstration effects. Backward-linkage inputs primarily include direct raw material (fabric, yarn); apparel trim and accessories; capital equipment and machinery parts for manufacturers or suppliers; and industry-specific services. Subcontracting of cut, make and trim activities is an important export-linkage channel for locally owned firms. FDI creates employment for low- and semi-skilled (often female) workers. But FDI also generates an important share of higher-skilled technical and management positions in apparel manufacturing. Foreign firms train workers and provide them with knowledge and skills. The establishment of branches of industry and the demand for skilled workers also act as forms of knowledge transfer in other sectors. Through companies' cooperation and communication with each other, new technological developments can spread and are accessible to other businesses. Demonstration effects from imitation might also generate spillovers. Apparel GVCs generate exports and have also created and revitalised operating skills and industrial capabilities, which has led to the improvement of trade-related infrastructure. As Staritz and Stacey (2016) find, Kenya, Lesotho and Swaziland have been less successful in initiating spillovers to the local economies. In these countries, FDI contributed to low local value added, limited local linkages, limited participation in management and led to the inadequate development of skills as well as low-level productivity improvements.

In a study of Chinese firms in Nigeria, Chen et al. (2016) do not find strong signs of backward linkages with domestic firms. The anti-clustering tendencies of many Chinese, and of the Nigerian firms that were observed, means there are few opportunities for cluster-based supply chain linkages to develop. Domestic firms' relationships with Chinese partners are based primarily on technical assistance and support rather than on upstream or downstream production. However, in general, Chinese firms tend to have more downstream linkages with local firms than upstream ones. On the downstream side, nearly all Chinese firms rely on local distributors for their goods. Chen et al. (2016) find a number of cases of positive technology transfer in the firms surveyed (e.g. skills transfer and training in production methods). However, this is not a systematic trend, and the level and formality of training varies substantially between firms and product industries. Despite popular claims that Chinese firms import their own labour, Chinese manufacturing enterprises appear to have a positive impact on employment creation. In the firms surveyed, local Nigerians constituted the majority of the workforce, with Chinese workers on average constituting only 20 per cent of all labour employed. Chinese manufacturing firms largely stayed out of downstream distribution, leaving room for Nigerians to take these opportunities. Chinese technology has also been a boon to Nigerian manufacturing enterprises.

Another example of the integration of African firms into GVCs or RVCs are the horticulture value chains in Kenya, Uganda and some other countries. By examining South African and Kenyan supermarket sourcing and retailing patterns. Barrientos, Knorringer, Evers, Visser and Opondo (2016) show how the demand for higher-quality products and enhanced workforce skills at lower costs drives the adoption of new technologies by supplier farms. This, in turn, creates new leverage points for economic and social upgrading by suppliers and workers with sufficient capabilities and skills. These firms are able to diversify by supplying both global and regional retailers, further enhancing their bargaining positions in relation to both sets of buyers.

SMEs and newly established firms may not have to tackle the challenges necessary for upgrading; however, lead firms can support them as partners. FDI also seems to favour domestic firms that supply intermediate goods and services (upstream market orientation) rather than the suppliers of final consumer goods (downstream market orientation). Thus, FDI spurs local investment and the rise of medium-sized enterprises (or an African *Mittelstand*) (Kappel, 2016), which have evolved in industrial clusters in the urban centres and have been fuelled by the growing incomes of the middle classes in Africa's cities. Many medium-sized enterprises have managed to integrate themselves into GVCs or RVCs in Lesotho, Kenya, Swaziland, Morocco and Egypt, among other places. Due to various obstacles (e.g. limited and costly access to electricity, water and finance; tax rates; inadequate managerial competencies), many domestic enterprises do not upgrade, fail to fully utilise their potentials and do not become part of GVCs or RVCs.

The net impact of FDI on domestic firms also depends on the macroeconomic environment within which domestic and foreign firms operate. A higher-quality business environment increases the likelihood of positive effects. Better access to foreign markets seems to significantly increase the ability of domestic firms to reap the benefits from FDI inflows. There are potentials in Africa to integrate into GVCs, and better insertion into GVCs may help foster structural transformation, export diversification, and the ability to absorb technology and skills from FDI. These benefits are especially important for countries with relatively small domestic markets (IMF, 2016). It is worth noting that integration into GVCs does not guarantee higher incomes and better qualified jobs, as countries participating in segments of the GVCs with low value added run the risk of being confined to these segments.

Figure 8: Sub-Saharan Africa and comparator countries: average depth of integration in global value chains, 2008-2012

Sources: Allard et al. (2016)

Many African countries have seen stronger integration into world markets during recent decades and are also integrating themselves into GVCs and RVCs (Figure 8). Local sourcing is the critical channel for delivering positive spillovers. Supply chains – in particular backward linkages through local sourcing – appear to offer the most direct channel for short- and long-term gains from FDI spillovers (Balchin et al., 2016; Farole & Winkler, 2014a). By pursuing a development strategy based on integration into one intermediary link within a value chain, many countries have managed to lift their income levels. Such a strategy has enabled them to gradually acquire new capabilities and benefit from knowledge spillovers and, ultimately, opportunities to diversify production and upgrade quality (UNCTAD, 2016). In addition, enhanced participation in GVCs has also been associated with more inclusive growth, especially when the sectors targeted are labour-intensive and employ relatively lower-skilled workers.

5 Conclusions: upgrading Africa's potentials – what matters most?

FDI is widely considered to be fundamental for growth, employment and structural change. FDI inflows produce heterogeneous effects that go beyond spillovers to domestic firms; they contribute to structural change. This paper identified channels through which FDI affects economic performance. These channels can help relevant actors to identify economic policy measures that will enhance the benefits of FDI in African countries. It should be kept in mind that Africa's growth performance over the past 15 years has created new domestic opportunities. We have highlighted the increasing FDI inflows into African countries and the gradual shift to more consumer-oriented industries. These investments are not necessarily correlated with country attractiveness, as evidenced by Angola, Algeria, Botswana, Mauritius, Mozambique and Rwanda: each of these countries is rated either "highly attractive" but have few FDI projects or "not particularly attractive"

but have secured a large number of FDI projects. This trend reveals that a country's natural resource wealth and geographic location are still the main drivers of FDI inflows into many African countries (DR Congo, Angola, Nigeria, Algeria, etc.). Apart from foreign investors from industrialised countries, enterprises from emerging markets have also started investing in labour-intensive industries in order to take advantage of the low minimum wages in some African countries. China and India are the major players from emerging markets in Africa. Chinese and Indian investors typically target construction, chemical and pharmaceutical products, ICT, and food and beverages (Ceglowski, Golub, Mbaye, & Prasad, 2015). The services sector (e.g. financial services) is an increasingly important destination for foreign investors in Africa. Manufacturing sectors (e.g. electronics, motor vehicles) have also received large investments in recent years. These are industries in which German companies enjoy comparative advantages, which could be exploited more forcefully in Africa as well.

The creation of more productive jobs for the rapidly growing population in Africa is central to achieving sustainable structural transformation. Among all the jobs directly created by FDI in Africa, about 80 per cent were located in cities and directly led to more than 600,000 jobs. FDI in urban agglomerations is an important driver of Africa's structural transformation. According to UN projections, the African population will rise to almost 1.7 billion by 2030. With almost 200 million people aged between 15 and 24, Africa has the world's youngest population, and it is growing rapidly. The region must create productive jobs for its 500 million potential new workers. The slight shift away from resource-seeking FDI has had an effect on employment: the share of jobs created by FDI in consumer-oriented industries has increased considerably and now exceeds the share of jobs generated by FDI in the extractive industries. However, most foreign investors hire low-skilled workers, and jobs for skilled workers are often limited. The largest share of jobs directly created by FDI in Africa is located in cities, reflecting the increasing urbanisation rates in African countries. FDI in cities is considered to be an important driver of Africa's structural transformation. Africa's advantage in low-wage industries is also reflected by its position in GVCs. Many countries are at the beginning of their integration processes. Most African exports are still at the lower end of GVCs. However, a couple of low- to upper-middle-income countries in Africa – including Kenya, Uganda and Ethiopia – have managed to integrate themselves into GVCs in, for example, the apparel industries, horticulture and supermarkets (Evers, Opondo, Barrientos, Krishnan, & Ndlovu, 2014).

The overall conclusion is that FDI in manufacturing, construction, trade services, transport, ICT, etc., has resulted in growing employment and positive labour productivity growth. This is mainly the case in urban hubs and in sectors that are integrated in GVCs and RVCs (car production, food production, ICT sector, horticulture, textiles, etc.). Productivity growth in these sectors is the sine qua non of long-term development. Our discussion paper also shows that, generally, the stronger integration of African countries into GVCs may also foster the absorption of technology and skills from FDI, and thereby enhance structural change and promote inclusive growth. Overall, however, the transfers of technology and spillover effects have been limited, and a systematic trend cannot be

identified. Based on the analysis of trends and the channels that are expected to drive structural transformation in Africa, the following policy measures are key.²¹

1. Macroeconomic and political stability and attractive general investment conditions are prerequisites for long-term growth. Regulatory quality and a positive overall institutional environment are important, not just for attracting FDI and stimulating domestic enterprises but also for enhancing economic performance. Looking at overall and business attractiveness indicators, it is clear that African countries lag behind many Asian and Latin American countries and have not fully utilised their potentials. Reducing the costs of doing business attracts local and foreign investment. Reliable macroeconomic policies with transparent budgetary strategies, clear taxation and expenditure rules, and realistic exchange rates are also needed, along with a proactive trade policy to foster exports in a sustained manner and to maintain a foothold in European markets while capturing market shares in emerging economies and markets elsewhere in Africa. Although instruments such as export subsidies, duty drawback schemes²² and the like exist, thus far they have been far less effective in Africa than has been the case in East Asia's success stories. Huge levels of public investment and private engagement are necessary to reduce gaps with other developing countries.
2. Policies that deepen the complementarities between FDI and domestic investment should be promoted to ensure sustainable growth. The development of backward linkages and local supply chains depends on creating a favourable investment climate for both local firms and foreign investors; this should include access to finance and imported inputs, the enforcement of contracts, reliable regulatory standards, adequate access to electricity, and improved infrastructure. These are the necessary – although not sufficient – conditions for success. Strong FDI linkages with the domestic economy (e.g. through supply chains, labour markets and other forms of collaboration) can result in a greater diffusion of knowledge, technology and know-how by the lead firms. In some middle-income and non-resource-dependent countries, an important channel for potential spillovers is the collaboration of foreign investors with local institutions. Incentives for foreign investors to engage in collaboration with local universities, research institutes and training institutes will transfer knowledge and technology or adapt international technologies to local conditions and support domestic and foreign companies. Government efforts to promote affordable access to credit through financial-sector reform remain important to delivering spillovers and improve opportunities to diversify production and upgrade quality. In addition, enhanced participation in GVCs has also been associated with more inclusive growth, especially when the sectors targeted are labour-intensive and employ relatively lower-skilled workers. As shown, not in every case do lead firms necessarily intend learning effects along the value chain. Reaping the benefits of GVC integration requires a change in industrial policy. Shifting its focus from developing a national industry to

21 Compare for additional concepts, strategies and measures stimulating FDI, supporting local businesses and related institutions Brach and Kappel (2009); Bass, Kappel and Wohlmuth (2017); AfDB et al. (2016); African Development Bank, Organisation for Economic Co-operation and Development, United Nations Environment Programme and United Nations Economic Commission for Africa (2012); Deloitte (2016); McKinsey & Company (2016); United Nations Economic Commission for Africa and African Union (2014); KPMG (2016).

22 Reimbursement of import levies on imports needed for local production, for example those of high-value inputs for manufacturing industries.

upgrading in GVCs (identifying niche activities) is essential. This requires moving up through the chain of production of a particular commodity or set of commodities to higher value-added activities. African economies can benefit most by specialising in particular segments of a value chain. This focused policy can be identified in some African countries such as Mauritius, South Africa, Kenya and Ethiopia. Governments need to foster foreign firms to create linkages with the domestic economy and strengthen links with domestic suppliers. This could be achieved by introducing tax incentives and local content requirements, including joint ventures, which would give domestic partners access to high-level technologies and managerial skills.

3. Most important is a strategy of raising productivity and efficiency levels through industrial clusters. Success depends not only upon the productivity of individual companies but also upon interactions among multiple enterprises linked vertically and horizontally. Successful enterprises are integrated in a milieu of cooperation and innovation, including enterprises, private and government institutions, and research facilities. Their activities facilitate learning processes. The development and dissemination of knowledge within clusters supports the upgrading of enterprises. Such upgrading is no longer merely a consequence of ad hoc industrial synergies but rather becomes a pivotal factor influencing local innovation systems. Successful upgrading takes place primarily at the local level. Expectations applying to such cluster effects have been very high, but many strategies – in particular the establishment of technology, industrial parks and SEZs – have not been very successful, either with regard to job creation or technology development.

Especially in connection with increased employment at enterprises that are integrated in networks, value chains and clusters, this model of growth in productivity and efficiency appears capable of contributing to the reduction of poverty. Efficient institutions that foster the private sector, for example by dismantling market entry barriers for SMEs or intensifying technology transfer, can stimulate economic growth and, hence, boost employment and raise incomes. One important element is the role of external technological effects, that is, the attraction of industrial branches and the demand for qualified labour have the effect of transferring know-how to other sectors. Intensive cooperation and communication among companies helps new technologies to disseminate very rapidly, thereby making them accessible to many enterprises. This triggers learning effects, allowing all companies involved to profit if there is sufficient institutional support – vocational training, research institutes, business development services, chambers of commerce and so on.

4. Agglomeration economies can be utilised in cities and industrial clusters. Innovative and competitive clusters can be drivers for more FDI. In urban centres, dynamics emerge, including growing purchasing power; lower transaction, transport and communication costs; and the availability of skilled workers in the cities. In growing cities – where the conditions for growth and the development of SMEs are evidently better – there is a greater likelihood of innovative and creative SMEs emerging. Supporting clusters through business development services, better transport systems, qualified labour, cooperation with research institutions and access to electricity would help to enable connectivity and improve the competitiveness and innovative capacities of SMEs. Improving job creation in SMEs requires barriers being removed, enabling SMEs to grow while supporting young people to become entrepreneurs and create their

own jobs. Start-up programmes, funds for young entrepreneurs, easier access to finance, pro-active support programmes for SMEs and business services can drive innovation and job creation. Informal firms can start to grow when they no longer face their main constraints (i.e. limited access to finance, electricity and land). These developments can help to attract FDI and foster investment in value chains and subcontracting with domestic medium-sized enterprises.

5. Regional economic integration is essential for Africa to utilise its full growth potential, to participate in the global economy and to enjoy the benefits of an increasingly connected global market. Many countries profit from stronger intraregional cooperation, connectivity and regional market expansion – all of which makes African markets attractive to local and foreign investors. Intraregional investment in infrastructure (roads, electricity, internet networks, ports and railways) will reduce trade and transport costs, foster competitiveness and facilitate RVCs and integration into GVCs as well as technology transfers to local entrepreneurs. Investment in the infrastructure of intraregional corridors will boost regional exchange and growth.
6. As indicated in Part 1, the limited penetration of African markets that utilise long-term finance is of particular concern, given the huge long-term investment needs of African economies (transport, electricity, telecommunications, etc.). Some reports (Della Croce et al., 2016) state that sub-Saharan Africa's infrastructure financing gap exceeds \$30 billion per year, and the financing gap for formal microenterprises and SMEs (excluding informal businesses) amounts to \$70-90 billion per year.

High growth rates and FDI inflows are not necessarily accompanied by a structural transformation towards a modern economy and, in turn, the creation of jobs in industry. Moreover, it does not necessarily translate into increased incomes. Our analysis shows that the recent trend of FDI inflows in the manufacturing sector is more employment-intensive, and thus further changes the African transformation process. Transforming the SME sector towards become a more sustainable employer with backward and forward linkages to large domestic firms and foreign companies provides additional employment, and thus more equitable development. This discussion paper highlights the benefits of FDI and its contribution to diversification of African economies' production structure. The increasing participation of some African countries in GVCs shows that some sectors (foremost South Africa in car production, wine industry, food production, steel, metal products, etc.; and a few countries such as Ethiopia, Kenya and Uganda in textiles, horticulture and floriculture) are becoming more productive. Despite significant advances in terms of macroeconomic stability and industrial reform in some countries, Africa's growth record remains a concern. Many African economies are still resource-dominant, and FDI inflows are mainly resource-driven. Some countries have very low FDI inflows, and some others started attracting consumer-driven FDI inflows. We have made it clear that some African countries are trapped in low value-added manufacturing with few spillovers and limited employment effects. However, our analysis shows that the upward trend in FDI inflows in manufacturing and services indicates an initial shift in production and employment pattern in some African countries, and especially in urban hubs.

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