

ONE

The Evolution of African Economies and Their Tremendous Business Potential

In May 2000, a cover of the periodical *The Economist* featured an image of the African continent, in which was depicted a man holding a firearm. The title read, in large golden letters, “The Hopeless Continent.” In an article titled “Hopeless Africa,” the periodical proceeded to highlight a range of challenges that plagued the continent and explained both its past poor economic performance and prospects. It mentioned diseases such as AIDS and malaria, and natural disasters such as floods. It underlined governance issues, such as corruption and “government-sponsored thuggery.” When covering the security state of the continent, the article went as far as to state that conflict—though not exclusive to Africa—persisted on the continent due to “reasons buried in their culture.” The continent was not just considered as the home of failure and despair by *The Economist* (2000) but also by scholars, who described it as being in permanent crisis (1979–1999, Van de Walle 2001), with slow economic growth (Collier and Gunning 1999a, 1999b; Easterly 2001a; Guillaumont et al. 1999; Sachs and Warner 1997) and overall poor economic performance despite various experiences (Acemoglu and Robinson 2010a; Bates 1981; Fosu 2010; Monga and Lin 2015a, 2015b; Ndulu et al. 2007).

More than 11 years after the publication of the “Hopeless Africa” article, *The Economist* published an article with a slightly different tone. In

December 2011, the cover of *The Economist* featured a young child flying a kite shaped in the form of Africa. The cover reads “Africa Rising.” In the featured article, the periodical praised the economic growth Africa had experienced over the past decade and partly attributed the high growth to the commodity boom. It also stated that the overall health of Africans had improved, due to antimalarial measures and other health precautions. Since the December 2011 publication, the periodical has published a number of reports praising the opportunities on the continent (*The Economist* 2013, 2016), which aligned with numerous optimistic studies (Fick 2007; Grosskurth 2010; Mahajan 2009; Roxburgh et al. 2010; Radelet 2010).

The two contrasted publications of *The Economist*, though a little more than one decade apart, paint two starkly different pictures. One might argue that the continent was not as hopeless as *The Economist* painted it out to be in 2000, and that in 2011, Africa may not have been as prosperous as *The Economist* claimed it was. The statistics show that the truth lies somewhere in the middle. While the African continent has made significant progress in recent years, there are challenges that have yet to be overcome. Moreover, Africa is not a monolith, and there are key differences among the fifty-five countries present on the continent. The reality is quite nuanced, and even within countries, certain sectors are performing well, whereas others are not.

Numerous scholars have tried to demystify Africa’s economic performance over the past six decades, exploring a broad variety of drivers. For example, some scholars have focused on institutions and political regimes (Acemoglu and Robinson 2010b; Azam et al. 2009; Bates 2006; Bates and Block 2011; Herbst 2000; North 1990; Radelet 2010; Przeworski 2004) in explaining economic trends on the continent, whereas others have used policies (Collier and Gunning 1999a, 1999b; Ndulu and O’Connell 1999), political instability (Brun et al. 1999; Fosu 2001), geography and the environment (Bloom and Sachs 1998; Collier 2006; McCord et al. 2005), ethnic fragmentation (Collier 2000; Easterly and Levine 1997), and historical legacy (Nunn 2008), among others, to explain Africa’s mixed economic performance since independence.

Contrary to publications that are either excessively pessimistic or overly optimistic, often without sufficient evidence, this book continues the tradition of axiological neutrality, avoiding bias and oversimplifications in the study of African economies (Signé 2017, 2018). The study therefore provides a cutting-edge but accessible perspective on the transformation of African

economies and their tremendous business potential, with a particular focus on eight major sectors throughout the African continent, to which each chapter is devoted: consumer markets and distribution, agriculture and food industries, information and communication technology, manufacturing and industrialization, oil and gas, tourism, banking, and infrastructure and construction. The book adopts an accessible data and evidence-driven framework to analyze Africa's tremendous business potential, and it assesses for each of the eight selected sectors the trends, drivers, key players, business and investment opportunities, and challenges and risks, as well as the business strategies to mitigate risks, transform opportunities into high return, and achieve inclusive growth. The book is a pivotal contribution to understanding the transformation of African economies and business opportunities.

The next sections discuss the evolution of African economies, from the perspective of many growth narratives, competitiveness, governance and business environment, demographics and youth, continental trade and integration, emerging partners, and the Fourth Industrial Revolution.

One Continent, Many Growth Narratives

Over the past decade, Africa was one of the fastest growing regions in the world. Moreover, the continent was largely able to dodge the negative effects brought about by the 2008 financial crisis. The skeptics will state that this is because Africa was not well integrated into the global economy in the first place. Nevertheless, the shield provided by the lack of integration was beneficial in the long run. In 2017, four of the fastest growing economies in the world were located in sub-Saharan Africa—Ethiopia, Ghana, Côte d'Ivoire, and Senegal. This contrasts with the year 2000, when only one of the ten fastest growing countries in the world was in Africa (see table 1.1). In reality, in 2000, five of the ten countries with the slowest GDP growth rate were located in Africa—Democratic Republic of the Congo, Gabon, Côte d'Ivoire, Niger, and Zimbabwe—against four in 2017—South Sudan, the Republic of the Congo, Equatorial Guinea, and Chad (see table 1.2). The tables show the large difference in the growth performance of African countries. In 2017, there was a 20-percentage point range in the growth rate of African countries, with Ethiopia at the higher end and South Sudan on the lower end. No other world region had such large disparities in growth rate within their countries.

TABLE 1.1. Fastest-growing countries in the world (2000 versus 2017).

| 2000 Growth Rate | | 2017 Growth Rate | |
|----------------------|--------|------------------|--------|
| Turkmenistan | 18.587 | Ethiopia | 10.861 |
| Myanmar | 13.746 | Macao SAR | 9.258 |
| Belize | 13.020 | Ghana | 8.439 |
| United Arab Emirates | 12.329 | Ireland | 7.808 |
| St. Kitts and Nevis | 12.259 | Côte d'Ivoire | 7.771 |
| Estonia | 10.568 | Nepal | 7.499 |
| Russia | 10.046 | Armenia | 7.478 |
| Ethiopia | 9.838 | Senegal | 7.164 |
| Kazakhstan | 9.800 | Tajikistan | 7.140 |
| Ireland | 9.575 | Bangladesh | 7.137 |

Source: World Bank data.

TABLE 1.2. Slowest-growing countries in the world (2000 versus 2017).

| 2000 Growth Rate | | 2017 Growth Rate | |
|------------------|---------|-----------------------|---------|
| Solomon Islands | -14.277 | Venezuela | -14.000 |
| DR Congo | -8.136 | Yemen | -13.839 |
| Iraq | -4.341 | South Sudan | -11.096 |
| Zimbabwe | -4.231 | Puerto Rico | -7.674 |
| Niger | -2.584 | Republic of the Congo | -4.608 |
| Papua New Guinea | -2.455 | Equatorial Guinea | -4.384 |
| Paraguay | -2.314 | Dominica | -4.172 |
| Côte d'Ivoire | -2.068 | Chad | -3.143 |
| Gabon | -1.883 | Trinidad and Tobago | -2.563 |
| Uruguay | -1.776 | Kuwait | -2.530 |

Source: World Bank data.

The tables not only showcase the large disparities in the growth performance of African countries, they also show the ways in which said growth performances fluctuate over time. Three groups of countries emerge. The first group comprises countries such as Senegal, Côte d'Ivoire, and Ghana, whose GDP growth rates have seen significant improvement over the past decade and a half. This is largely showcased by the case of Côte d'Ivoire, one of the largest success stories on the continent over the past decade. After emerging from the 2011 civil war, which left more than 3,000 people dead (Sturm 2013), the country has managed to go from one of the slowest growing economies in the world to one of the fastest. Since 2012, the year following the end of the Ivoirian civil war, Côte d'Ivoire has seen some of the largest growth in the net flows of foreign direct investment in sub-Saharan Africa; the net flows of foreign direct investment (FDI) into Côte d'Ivoire more than doubled over the past 5 years.

The second group comprises countries who have seen their economic performance remain steady since 2000. Said group includes countries such as Rwanda and Ethiopia. With the exception of a slight regression in 2002, since 2000, Ethiopia has grown at a steady rate of 7 percent or higher. The flow of FDI into the country has been multiplied by 25 since 2000. According to the World Economic Forum, Ethiopia's growth is largely driven by an increase in industrial activity, notably through investments in infrastructure and manufacturing. The growth in FDI is partly attributed to the creation of industrial parks and privatization, as Ethiopia continues to sell goods to China (Gray 2018). Some scholars have even referred to Ethiopia as the new China, given its potential to attract low-wage manufacturing (Gelb et al. 2017). The International Monetary Fund predicts that Ethiopia will continue to grow at a rate surpassing 8 percent yearly. Despite the strong growth in investment, last year, Ethiopia faced challenges brought about by droughts; the Ethiopian government increased the number of people requiring food aid by nearly 38 percent, thus averting a famine. This goes to prove that even when growth figures look promising, there can be other challenges a country faces that can create disasters if they go unchecked.

The third group of countries includes those whose economic performances have stagnated over the past few years. This group includes the Central African Republic, Chad, and Zimbabwe. Up until 2009, Zimbabwe's GDP was constantly on the decline. It slightly improved in the early 2010s and is now stabilizing at 3 percent, on par with the African

growth rate of 3 percent. Over the years, investments into Zimbabwe have remained meager. While, in aggregate numbers, FDI into Zimbabwe has been multiplied by 12, the country attracts less than 1 percent of the total FDI into all of Africa. Zimbabwe's poor economic performance can be tied to a list of factors, ranging from poor macroeconomic governance to corruption and poor political governance. The country performs poorly according to business indicators and has not been successful in attracting the foreign investment necessary to kickstart its economy. Today, Zimbabwe is under new leadership. In January 2018, President Mnangagwa reassured the international community that "Zimbabwe is open for business" (Quest and McKenzie 2018), and that his administration will work hard to tackle corruption and create the infrastructure necessary to attract investment, but numerous challenges remain.

In its 2011 article, *The Economist* largely attributed the growth in African countries to the commodity boom; this nearsighted view hides the large disparities in the economic performance of African countries over the past years. As exemplified by the three different countries and the groups of countries that they represent, there are various narratives to describe the ways in which Africa operates, and they should be studied individually. Regardless of the stage of its economic growth, every African country presents a particular set of opportunities across various sectors, as will be highlighted throughout this text.

The Competitiveness of African Economies from Global and Comparative Perspectives

The Global Competitiveness Index 4.0, developed by Klaus Schwab at the World Economic Forum, is a new measure of productivity and performance. The majority of sub-Saharan African countries rank toward the bottom of the list, though a few are performing above countries typically categorized as high performing, such as India and Turkey. Mauritius, South Africa, Seychelles, Botswana, and Kenya all rank within the top 100 countries on the Global Competitiveness Index 4.0.¹ Another report on seventy-one emerging economies lists Ethiopia as the only outperforming African country, having achieved an annual GDP per capita growth of more than 5 percent for 20 years.² Ghana, Mozambique, and Rwanda are considered "recent accelerators" in the same analysis, having experienced significant growth at a 3.6 percent compound annual growth rate, which is

higher than long-term outperformers but during a shorter period.³ Recent outperformers, like Ethiopia, evidenced the highest percentage of capital accumulation as a factor of labor productivity, suggesting possible solutions to recent accelerating countries and consistently growing countries on the continent.

The majority of African countries find themselves among the “underperforming” or “volatile” emerging economies, which can be attributed to overall lower levels of investment, income, and domestic demand. Underperforming countries also often have limited domestic savings resources, which hinders industrialization and subsequent growth in employment and wages. As a continent, Africa will have the fastest and highest growth rate of GDP at 7.3 percent from 2016 to 2022, which is 1.1 percent higher than the next highest continent, Asia.⁴ Thus, while high-performing countries will drive this continent-wide growth, low and underperforming economies have the potential to increase their GDP per capita through the growth of large firms and foreign investment. Competitive companies from emerging economies have proven to outperform their counterparts in advanced economies, so large firms may begin to drive the growth of economies across the continent by growing domestic income, advancing innovation, and sustainably using resources. The projected growth of Africa will be a general incentive to foreign investors, and improving governance indicators and greater political stability will lead to more investment.

October 2018 saw nine African countries reporting annual GDP growth of 6 percent or higher, with Libya recording the highest annual change at 10.9 percent.⁵ This high percentage of growth rivals the GDP growth of emerging economy powerhouses India and China, and a majority of other African countries are close behind in terms of rapid growth. Twenty-eight African countries reported annual GDP growth between 3 and 6 percent in 2018, including Burkina Faso, Cameroon, Chad, Madagascar, Niger, Tanzania, and Uganda.⁶ The International Monetary Fund also monitors annual changes in inflation based on average consumer prices, which gives more insight into the real growth potential of African economies in terms of demand, income, and fiscal stability. Numerous countries showed moderate inflation rates between 0 and 3 percent in 2018, indicating the potential for higher returns for investors. These countries include Benin, Burundi, Cameroon, Chad, Côte d’Ivoire, Djibouti, Equatorial Guinea, Gabon, Guinea Bissau, Mali, Morocco, the Republic of the Congo, Senegal, and Togo.⁷ The rest of the continent is projected to experience some moderate

increases in inflation within the next 5 years. However, these fluctuations are all projected to occur slowly, likely reflecting growing wages, decreasing risk to foreign investment in African countries, and the development of the private sector.

Improved, Accountable, Effective Governance and the Business Environment

African populaces across the continent are supporting a trend toward improved, accountable governance through the use of democratic elections, term limits, and increased citizen responsibility. In 2014–2015, Afrobarometer surveys reported more than 77 percent of the continent supported democracy, almost 75 percent wanted leaders to be limited to two terms, and more than 53 percent said it is important for citizens to hold governments accountable—even if that translates to slower decisions. Recent leadership changes in Africa signal that accountability and citizens' demands for constitutional checks on leaders are growing stronger. Since 2016, meaningful elections have led to changes in numerous countries, including Benin, Comoros, Ghana, Lesotho, Liberia, São Tomé and Príncipe, and Sierra Leone. Elections are the first step toward improving government accountability and have the potential to directly impact African business environments.

During the period from 2008 to 2017, the Mo Ibrahim Foundation reported that thirty-four countries had improved their overall governance, affecting 71.6 percent of Africa's citizens.⁸ Improvements in overall governance reflect higher levels of accountability: vertical accountability that citizens exercise through elections; horizontal accountability of government checks and balances; and diagonal accountability, or the effect of personal responsibility on institutions. Comparing countries' levels of accountability with the World Bank's data on the ease of doing business, Mauritius (25), Rwanda (41), Kenya (80), Botswana (81), and South Africa (82) were the five highest-ranked sub-Saharan African countries with the most business-friendly regulations. These countries have either maintained high levels of accountable, effective governance or have significantly improved their scores in recent decades. Rwanda, for example, has increased its levels of governmental effectiveness, regulatory quality, rule of law, and control of corruption each by at least 20 percentage points from 2008 to 2017.⁹ The *Doing Business 2019* report projects Rwanda's ease of doing business rank

will jump from 41 to 29 within the year, indicating further correlation between improving governance and maturing business environments.¹⁰

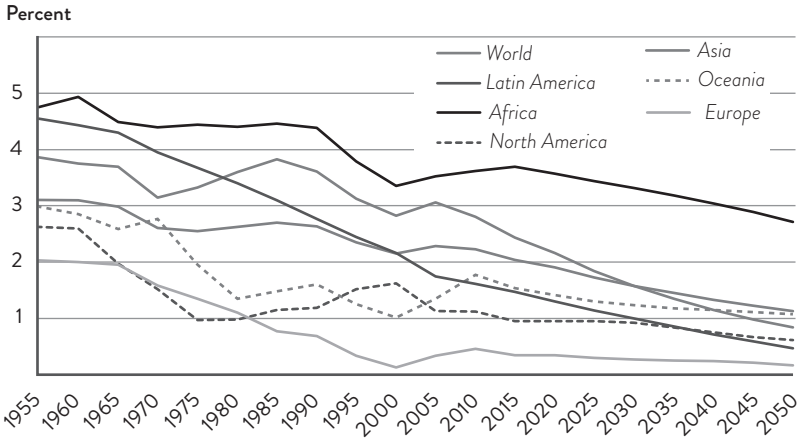
Table 1.3 indicates the challenges that the continent still faces in regard to improving the overall business environment and becoming a more attractive destination for investors. Focusing on trade and customs regulations in the past has led to improvement in customs procedures, but this intersection of governance and business may continue to decline in effectiveness as states focus on other deteriorating aspects of the business environment. The increasing improvement in government development of regional integration points to the implementation of the African Continental Free Trade Area (AfCFTA) and other regional economic agreements. These and other efforts to improve the business environment convey the promise of trading and investing on the continent. And this book's assessment of the opportunities and risks to doing business in each sector will provide additional insights for those seeking to mitigate risks and capitalize on the high returns that African countries offer elsewhere.

Africa's Demographics and the Opportunities It Presents

The demographics of the African continent paint an interesting and encouraging picture. Estimates show that by 2030, Africa's population will reach about 1.4 billion people; in 2050, about 2.1 billion; and in 2100, about 3.8 billion. In 2030, over 50 percent of the population will be concentrated in seven countries (Nigeria, Ethiopia, Democratic Republic of Congo, Egypt, Tanzania, Kenya, and South Africa). Four of those countries will have over 100 million people: Nigeria (264 million), Ethiopia (139.6 million), Democratic Republic of Congo (120.4 million), and Egypt (119.7 million). In addition, Africa's population is becoming increasingly urban. Today, Africa is the fastest urbanizing region in the world (figure 1.1). By 2035, more than half of Africa's population will live in cities, and by 2050, nearly 60 percent of Africa's population will be urban (figure 1.2). Cities present opportunities that investors should move toward capturing, such as a skilled workforce and a relatively wealthy consumer base.

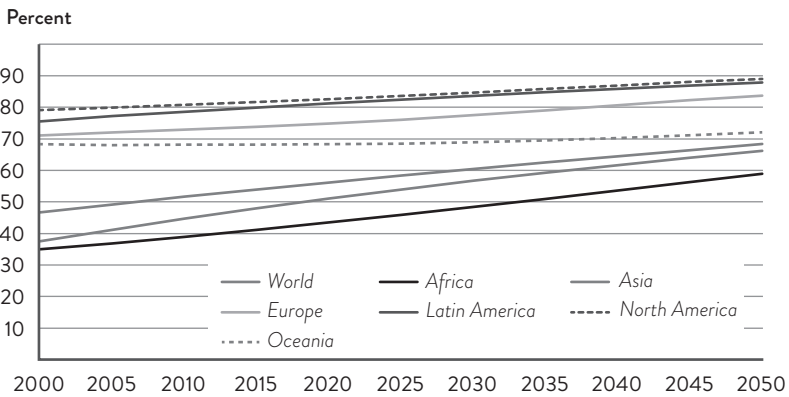
Today, Africa has one of the highest dependency ratios in the world. However, a closer look at the figures indicates that Africa has a relatively low old-age dependency ratio. In other words, the high dependency ratio can be attributed to the large number of children below age 15. This represents a key asset as said children will be an important share of Africa's

FIGURE 1.1. Average annual rate of change of the urban population by world region.



Source: World Economic Prospects, 2018.

FIGURE 1.2. Percentage of population at midcentury residing in urban areas by world region.



Source: World Economic Prospects, 2018.

TABLE 1.3. Business environment across Africa.

| Business Environment | 2017 African score/100.0 | 10-year AAT* (2008–2017) | 5-year AAT* (2013–2017) | Trend Classification |
|--|--------------------------|--------------------------|-------------------------|--------------------------|
| Business Regulatory Environment | 46.7 | -0.04 | -0.03 | Slowing Deterioration |
| Absence of Excessive Bureaucracy & Red Tape | 24.4 | -0.47 | -0.88 | Increasing Deterioration |
| Absence of Restrictions on Foreign Investment | 55.3 | -1.68 | -0.48 | Slowing Deterioration |
| Efficiency of Customs Procedures | 48.7 | +0.78 | +0.48 | Slowing Improvement |
| Robustness of Banks | 46.3 | -2.34 | -2.10 | Slowing Deterioration |
| Satisfaction with Employment Creation | 30.2 | -0.34 | -0.28 | Slowing Deterioration |
| Government Development of Regional Integration | 58.8 | +0.18 | +0.60 | Increasing Improvement |

*AAT = Annual Average Trend

Source: Mo Ibrahim Foundation (2018).

consumer base by 2030. In recent years, child mortality has declined as fertility rates remained unchanged, thus creating what demographers call the demographic dividend. If harnessed properly, the dividend can serve in furthering Africa's development. By 2030, today's African youth will be the workers and consumers of Africa, providing businesses with opportunities that are not to be overlooked. In order to benefit from Africa's large workforce and customer market in 2030, investments are to be made today.

In addition to offering an increasingly young and urban population, Africa is also presenting a growing class of consumers with discretionary income. This group is often referred to as the middle class, but there is significant debate over the methods by which to determine membership in a cross-national "global middle class," which spans diverse social, political, and cultural contexts. Many researchers have relied on a variety of income-based definitions due to the difficulty of operationalizing sociologically based definitions of class. These researchers may define the global middle class as a grouping that (1) falls in the middle of the global income or consumption distribution (see Easterly 2001b and Quah 1996); (2) enjoys a sufficiently high standard of living to be free from severe economic deprivation without rising above a threshold of affluence (see Banerjee and Duflo 2008; Birdsall 2012; Kharas 2017; Lopez-Calva and Ortiz-Juarez 2014; and Ravallion 2010, among others); or (3) constitutes a consumer market with defined features, such as sufficient contribution to global aggregate demand or to the demand of specific industries (see Barberena et al. 2006; Court and Narsimhan 2010; Dadush and Ali 2012; and Kamakura and Mazzon 2013).¹¹ Within each of these definitions, the size of the middle class may vary significantly based on the cutoff values used; Jayadev et al. (2015)¹² compared five definitions of the middle class and found that its estimated size for sub-Saharan Africa ranged from 32 million (Kharas 2010) (updated to 114 million in Kharas 2017) to 425 million (Roxburgh et al. 2010) people, with projections ranging from over half a billion by 2030 to 1.1 billion (out of 2.6 billion) people by 2060 (Deloitte 2014).

The foregoing approaches have strengths and weaknesses; however, the goal of this analysis is not to end the debate on the definition of the middle and upper classes but to provide practical analytical tools for a broad variety of global and local business leaders and policymakers so that they can make decisions based on their own goals and target market segments related to Africa's opportunities. It is important for businesses to embrace the

conceptual diversity of Africa, and to understand that sub-Saharan Africa went, for example, from 45 percent of people living above the poverty line in 1990 to 59 percent in 2015, marking a considerable improvement (while acknowledging the broad variety behind such a number, including the unique needs of people above the poverty line but at risk of falling back below; low-, middle-, and upper-middle classes; and the upper class). Both the percentage of people above the poverty line and the evolution of this number are important, as the percentage includes both people with discretionary income—even if limited—and the middle and upper classes, and the evolution helps to understand the growth of Africa's consumer markets. The substantial improvement of such statistics represents a tremendous opportunity, both because it shows an improvement of living standards and because consumers with incomes above the poverty line have at least some access to discretionary income, depending on the sector, country, and type of service or product. Furthermore, even people living below the poverty line still have needs that require innovative and sustainable business solutions from creative entrepreneurs to leave no one behind. The tremendous potential of African countries is therefore correlated not only to population growth but to income growth as well.

Emerging International Partners for Africa

Much of the innovative and productive potential in Africa has already attracted substantial foreign investment. In the agricultural sector, European, Chinese, Saudi Arabian, North Korean, and Indian companies are presently investing funds, ranging from several million to billions of dollars to buy or lease mass hectares of land in order to promote various agricultural projects. Currently, countries such as Cameroon, Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Mozambique, and Senegal are growing a variety of marketable produce, including flowers, lentils, palm oil, rice, sugar cane, bananas, and corn.¹³ Chinese lending to sub-Saharan African countries is particularly noteworthy because bilateral loans account for an estimated 14 percent of total debt contracts. These loans are only a small portion of the economic relationship between Africa and China. African countries also trade a significant amount with China.

African countries are increasingly building ties with other emerging economies. Trade with Brazil, India, Indonesia, Russia, and Turkey increased by over 100 percent between 2006 and 2016. African countries,

as shown in table 1.4, have imported an estimated USD 156,632 million worth of imports from India and exported USD 310,787 million worth of goods.¹⁴ Trade with China, the United States, and the European Union still represents more than 30 percent of the continent's total imports and exports, but these emerging trade relationships are taking increasingly larger shares of African imports and exports.

The African Continental Free Trade Area

When the AfCFTA went into force on July 8, 2019, fifty-four of the fifty-five African countries were party to the agreement. Only Eritrea had neither signed nor ratified the document. The AfCFTA, which establishes a single continental market for goods and services as well as a customs union with free movement of capital and travelers, will also contribute to unlocking business potential, generating opportunities for industrialization, and creating desperately needed jobs. This free trade area is expected to dramatically expand intra-African trade: some studies have shown that the creation of the AfCFTA could increase intra-African trade by about 52 percent by just 2022. In the long term, the United Nations Economic Commission for Africa estimates that the AfCFTA will increase the value of intra-African trade by between USD 50 billion and USD 70 billion by 2040, compared to a situation without the AfCFTA. As noted by Signé (2018b), the market size will include 1.7 billion people with over USD 6.7 trillion of combined consumer and business spending in 2030.

The AfCFTA will have cascading effects. Policymakers anticipate that the trade deal will drive the structural transformation of economies—the transition from low productivity and labor-intensive activities to higher productivity and skills-intensive industrial and service activities—which in turn will produce better paid jobs and make a positive impact on poverty. Indeed, by promoting intra-African trade, the agreement will foster a more competitive manufacturing sector and promote economic diversification. The removal of tariffs will also create a continental market that encourages companies to benefit from economies of scale—enabling countries to accelerate their development.

TABLE 1.4. Trade with Africa.

| Countries | Change in imports (2006-2016) (%) | Total value of imports (in US\$ millions) | Share of total imports (%) | Change in exports (2006-2016) (%) | Total value of exports (in US\$ millions) | Share of total exports (%) |
|----------------|-----------------------------------|---|----------------------------|-----------------------------------|---|----------------------------|
| Brazil | 12 | 51,849 | 1.5 | 66 | 95,516 | 2.7 |
| India | 181 | 156,632 | 4.6 | 186 | 310,787 | 8.7 |
| Indonesia | 107 | 30,825 | 0.9 | 147 | 32,847 | 0.9 |
| Russia | 142 | 19,675 | 0.6 | 168 | 5,241 | 0.1 |
| Turkey | 192 | 26,139 | 0.8 | 61 | 10,023 | 0.3 |
| China | 233 | 435,737 | 12.7 | 53 | 459,206 | 12.9 |
| European Union | 22 | 874,981 | 25.5 | -5 | 827,417 | 23.2 |
| United States | 7 | 219,091 | 6.4 | -66 | 482,189 | 13.5 |
| World | 56 | 3,432,539 | 100 | 18 | 3,573,221 | 100 |

Source: IMF, Direction of Trade Statistics, 2017.

The Fourth Industrial Revolution in Africa

The Fourth Industrial Revolution (4IR) describes a range of innovations and disruptions that aim to reshape the global economy, using the Internet of Things, artificial intelligence, biotechnology, 3D printing, among other technologies. Academics and investors alike are dedicated to capitalizing on the potential of the 4IR around the world, and the African continent stands to benefit exponentially from the 4IR.

African firms have limited drawbacks to integrating 4IR technology into current operations by leapfrogging legacy infrastructure, revitalizing public sector support, and establishing mutually beneficial public-private partnerships. Africa also benefits from the rapid expansion of mobile broadband networks across the continent, which can attract investors to the information and communications technology sector in particular and to other enterprise opportunities facilitated by increasing interest in the adaptation of local infrastructure to new technologies. States like Kenya and Rwanda are proactively adopting national strategies for technological adoption and fostering innovation with policies that enable heightened technical capacity. Other countries, like South Africa, Nigeria, and Egypt, each host more than thirty tech hubs. And creative entrepreneurs are launching a broad distribution of services to meet the needs of Africa's markets with technology, from mobile applications for agricultural finance to 3D printing of titanium metal parts.

This book provides guidance to people interested in doing or understanding business in Africa, and those looking for a clear and straightforward analysis of the new transformations and economic opportunities on the continent. This book offers explanations for what is at play in Africa, how to identify business and investment opportunities and transform them into results, thus creating value that contributes to economic growth, poverty alleviation, and a brighter future for the cradle of humanity. The book is also intended for leaders involved in the formulation and implementation of development strategies in Africa. These include policymakers and experts in government, international, and nongovernmental organizations geographically located in developed and developing countries interested in creating conducive environments for doing business or generating inclusive growth and development. The book's chapters cover the following sectors: consumer markets, agriculture and food industries, information and communication technologies, manufacturing, oil and gas, tourism, banking,

and infrastructure and construction. Each chapter presents the key facts and trends, the relevance of the sector for the economy and development, key players and spending trends, specific opportunities with country cases, the challenges, risks, and strategies to transform the opportunities into results, and the perspectives for the future.