Made in Africa

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CHAPTER 2

Industrialization Efforts and Outcomes

The idea that Africa should industrialize is not new. The Continent’s postindependence leaders—like those in many developing countries in the 1960s and 1970s—looked to industrialization as the key to rapid economic growth and transformation of their societies. Those aspirations have not been fulfilled. Both regionally and at the individual country level Africa has ended up in 2015 more or less where it started in terms of industrial development in the 1970s. Today Africa stands out as the least industrialized region of the developing world.

This chapter begins with an overview of Africa’s industrialization since independence. It then surveys the industrialization experiences of ten African countries in greater detail. Nine were the subjects of our Learning to Compete (L2C) country studies: Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Senegal, Tanzania, Tunisia, and Uganda. We chose to add a tenth country, Mauritius, because it is, apart from South Africa, sub-Saharan Africa’s most successful industrializing economy. The eight sub-Saharan countries that we studied were among Africa’s early industrializers, and they are some of its current growth leaders. Six of the eight have
been among the region’s fastest-growing economies since 2000. In many ways they are representative of sub-Saharan Africa as a whole.\textsuperscript{1} Together they account for 54 percent of the region’s GDP and 56 percent of its population. They are all making the transition from low-to lower-middle-income status. Ethiopia is the poorest. Nigeria—an oil exporter—is the region’s largest economy. Tunisia in North Africa, like Mauritius, has had a very different industrialization experience from the sub-Saharan countries.

Despite major differences in history, language, and political structure, the sub-Saharan countries that we studied share a striking uniformity in their approach to industrialization. These experiences are described in this chapter. Broadly, policies to encourage industrial development were implemented in three phases: state-led import substitution, structural adjustment, and investment climate reform. Industrial performance has also taken place in three phases, albeit with some variations across countries: a postindependence boom that ended in collapse, retrenchment and stagnation, and more recently modest growth that in most cases has failed to keep pace with overall GDP growth. We conclude the chapter by posing the question: Is Africa’s failure to industrialize due to bad luck or bad policy?

### Ending Up Where It Started: Industry in Africa since Independence

Beginning in the late 1950s, newly independent governments virtually everywhere in Africa sought to promote state-led industrialization. Protected from international competition and pushed by public

\textsuperscript{1}. Except where specifically noted, the country narratives and statistics in this chapter are drawn from these country case studies. To avoid excessive referencing, case studies and their authors are listed in a separate section of the references. The country studies are available as Brookings Learning to Compete Working Papers (www.brookings.edu/about/projects/africa-growth/learning-to-compete) and as WIDER Working Papers (www.wider.unu.edu/research/current-programme/en_GB/L2C-2010/).
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investment, industry took off in the 1960s. The boom was short-lived. By the 1980s growth of industrial output, manufactured exports, and manufacturing sophistication across Africa had all begun a long decline.

From Boom to Bust

Figure 2-1 traces the share of manufacturing in GDP for sub-Saharan Africa (excluding South Africa) from 1960 to 2012. Manufacturing boomed in most African economies in the decade following independence. For sub-Saharan Africa as a whole, manufacturing growth averaged 8.3 percent per year between 1960 and 1970, about twice as fast as overall output growth. The share of manufacturing in GDP increased from 6.3 percent in 1960 to around 11 percent in 1970.

In the 1970s manufacturing growth decelerated, failing to keep pace with the rate of growth of total output. This abrupt break in momentum was not the result of a fall in investment in industry. It was the result of a major decline in the productivity of investment due, in large part, to underutilization of capacity because of shortages of imported intermediate inputs. Industrial performance—especially in the state-owned sector—was also compromised by policies that emphasized large investments and employment at the expense of firm-level productivity.\(^2\) A short-lived recovery of manufacturing took place in the 1980s. Between 1980 and 1988 the region’s manufacturing share of GDP rose to a peak of about 12 to 13 percent, but since then Africa has deindustrialized. The share of manufacturing in GDP declined continuously from 1990 to around 2006, when it stabilized at about 10 percent of GDP, the same level as in 1965.

The long decline in manufacturing production was reflected in a similar decline in manufactured exports. Over the past thirty years, despite rapidly growing global demand for manufactures produced in developing countries, African manufacturing has been unable to maintain its share of global markets. While developing countries as

\(^2\) Meier and Steel (1989).
a whole increased their share of global manufactured exports from about 10 percent in 1980 to 29.6 percent in 2011, Africa’s share of global manufactured exports fell from about 3 percent to 2.8 percent, about half of which was produced by South Africa alone.

The main reason the region has been unable to keep pace with the rest of the developing world is that global manufacturing capacity has moved out of Africa. Export growth can be decomposed into three parts: global growth of demand, shifts in the location of global production, and changes in export orientation. In the 1980s and 1990s, despite growing global demand and increasing export orientation of Africa’s economies, industrial export production was moving out of Africa. It was the only region in the developing world in which the geographical shift of production capacity for manufac-
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tured exports was consistently negative. Manufacturing was moving “out of Africa.”

Declining Diversity and Sophistication

In chapter 1, we showed that diversity and sophistication of production and exports are important predictors of long-term growth. As manufacturing output and exports declined between 1975 and 2005, Africa’s manufacturing base became less diverse and less sophisticated. Production became increasingly concentrated in low-sophistication goods, and the region exited high-sophistication activities. Using the data from chapter 1, we have computed the economywide average level of production sophistication in eighteen African countries in the 1980s and in the 2000s. We also estimated the cross-section “average” level of manufacturing sophistication associated with a given level of per capita income from the global UNIDO database in the same years.

Figure 2-2 presents the results. Because the relationship between per capita income and production sophistication rises with income, it is best to compare each country’s observed level of sophistication in manufacturing with the predicted value based on its per capita income from the global sample. Countries above their predicted values, those with a ratio greater than 1, produce a basket of goods typical of economies at higher levels of income. We are most interested in these “positive outliers.” The basic premise of “what you make matters” suggests that countries that consistently produce goods that are more sophisticated than predicted from their level of income will grow faster.


4. The level of sophistication of each economy’s industrial sector is the weighted average of each country’s individual product sophistication measures, where the weights are the share of manufacturing value added of each sector.

5. Because the indices of product and export sophistication are measured in current U.S. dollars, it is not possible to compare sophistication levels from year to year directly, because they are affected by price changes.
The African economies in figure 2-2 stand out in two important respects. First, a majority of countries are either at or below the level of sophistication predicted from their level of per capita income in the years from 1995 to 2005. Only seven of the eighteen countries exceeded their predicted values. The majority of African countries were producing manufactured goods that were characteristic of countries at lower levels of income than their own. Second, the sophistication of the manufacturing sector declined in eleven of the eighteen economies between the 1980s and the 2000s. The fall was especially sharp in several of Africa’s early industrializers—Ivory Coast, Kenya, Nigeria, Tanzania, and Zimbabwe. By way of contrast, over the same period the Asian countries in the UNIDO sample
were all producing goods typical of economies at higher levels of per capita income.⁶

**Industrial Policy and Performance: 1960 to the Present**

Broadly speaking, industrial policy in the African countries we studied has gone through three phases: state ownership and import substitution, structural adjustment, and investment climate reform. Industrial performance has also been broadly the same across countries: a postindependence boom that ended in collapse, retrenchment and stagnation, and more recently modest growth. Here, we review these three periods of industrial development efforts and outcomes.

**State Ownership and Import Substitution (1960–85)**

When Africa gained independence, leaders in former English, French, and Portuguese colonies shared similar views on the key role of industrialization, strongly shaped by a desire to modernize their mainly agrarian economies and reduce dependence on the former colonial powers.⁷ The centerpiece of the industrialization effort was the development of large-scale, often capital-intensive manufacturing industries owned and managed by the state. Protection of the domestic market against imports was viewed as necessary for successful industrial development and was particularly appealing to postcolonial leaders as a way of securing “economic independence.” The state became the central actor in the industrialization story for a variety of reasons, some reflecting political ideology.⁸ Nationalism was certainly a key motivation. Newly independent African governments invested heavily in state-owned enterprises (SOEs) for the

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⁶ UNIDO (2009).
⁷ See Killick (1978) for an excellent survey of the strategies pursued by Africa’s postindependence leaders.
⁸ See Ndulu (2007).
domestic production of intermediate and consumer goods and to process exports of primary products.

Arguably, Ghana took the lead. When it gained independence from Britain in 1957, President Kwame Nkrumah embraced industrialization to transform the economy and to reduce dependence on the United Kingdom. His industrial development program emphasized import substitution, supported by high levels of tariff protection. It was Nkrumah’s belief that every imported item that could be manufactured locally added to Ghana’s continuing economic dependence on the colonial system. The government invested heavily in infrastructure and manufacturing, including producers’ goods. The electrical, electronic, and machinery industries in particular were viewed as essential to provide the inputs needed to expand the industrial sector. Four other countries—Nigeria, Senegal, Tanzania, and Uganda—followed very similar approaches upon gaining independence in the 1960s. Kenya, in contrast, adopted a postindependence industrialization strategy that while relying on import substitution gave a smaller role to the state. State ownership and management was limited to a few “strategic industries.”

Two governments followed more explicitly central planning approaches to industrialization. In 1974 the Ethiopian Revolution brought the Marxist Dergue government to power. It nationalized most privately owned medium- and large-scale manufacturing enterprises and increased protection of the domestic market. After independence in 1975, the Frelimo government in Mozambique introduced a set of policies designed to make the public sector the leading economic actor. Both countries invested heavily in SOEs with widespread donor support and sheltered them from competition through domestic regulations and control of imports.

Tunisia and Mauritius were the outliers on the Continent. At the beginning of the 1960s the Tunisian government embraced import substitution and state ownership, but by the 1970s it had adopted an *infîtâh* policy that combined import substitution and export promotion. The economy was divided into an offshore sector, dominated by foreign investors and geared toward exports, and an
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onshore sector, shielded from competition and regulated by the state. The onshore private sector primarily consisted of small factory units that focused on production of simple consumer goods for the domestic market. Heavy industry, transport, water, and electricity were state-owned sectors.

By the time of Mauritius independence in 1968, an incentive regime designed to encourage import substitution by private investors had yielded very little industrial investment. In 1970 the government shifted gears and began attempting to attract local and foreign private investment into exports. An export processing zone (EPZ) was created that offered duty-free entry of inputs, free repatriation of capital, and greater flexibility in labor relations. EPZ factories were scattered throughout the island in small or individual industrial sites. The government provided infrastructure and factory spaces as part of an incentive framework designed to increase cost-competitiveness. These policies attracted both foreign and domestic investors to the EPZs, mainly in the production of textiles and clothing.

A Short-Lived Boom

Protection from import competition and public investment strongly pushed industrial development in the postindependence period (table 2-1). Between 1965 and 1970 manufacturing output grew at more than 7 percent per year in all countries (except in Mozambique, which was still in its liberation struggle). In Ethiopia and Ghana, manufacturing grew at more than 8 percent, and in Tanzania and Uganda at nearly 10 percent per year. As early as 1970, however, the industrialization drive was beginning to lose steam in some countries, and by 1975 growth of the manufacturing sector had begun to lag total output growth in Ghana, Senegal, and Tanzania. Kenya and Nigeria, in contrast, maintained robust manufacturing growth throughout the 1970s.

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<td>3.20</td>
<td>4.56</td>
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<td>5.00</td>
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<td>7.67</td>
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<td>3.84</td>
<td>5.75</td>
<td>2.52</td>
<td>−0.03</td>
<td>3.09</td>
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<td>n.a.</td>
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<td>18.97</td>
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<td>13.59</td>
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<td>4.10</td>
<td>−1.07</td>
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<td>8.85</td>
<td>8.43</td>
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<td>4.05</td>
<td>3.19</td>
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<td>3.11</td>
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</tr>
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<td>4.73</td>
<td>2.36</td>
<td>−5.01</td>
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<td>5.73</td>
<td>8.09</td>
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<td>11.09</td>
<td>4.95</td>
<td>5.69</td>
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<td>n.a.</td>
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<td>2.42</td>
<td>10.35</td>
<td>11.26</td>
<td>11.66</td>
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Notes: All growth rates in constant prices. n.a. = not available.
Lagging output growth and underutilization of capacity in manufacturing became more widespread in the early 1980s. Between 1980 and 1985, manufacturing growth turned negative in Ghana, Nigeria, and Tanzania. In the remaining countries growth of manufacturing failed to exceed 4 percent per year. The countries in industrial decline shared a number of common characteristics. Levels of effective tariff protection to the manufacturing sector were very high and the efficiency of production, measured in terms of international prices, was low. In some cases final-stage consumer goods were produced at negative value added in international prices—the cost of the imported intermediate inputs actually exceeded the border price of the fully manufactured import.

Contrary to the intent of the import substitution strategy, dependence on imports actually increased. This was largely due to two characteristics that were widely shared: (i) the import-substitution manufacturing industries were heavily dependent on imported intermediate and capital goods, and (ii) the relative neglect of agriculture led to rising food imports. Public investment had begun to exceed the fiscal capacity of the state and, perhaps more important, the state’s capacity to manage the enterprises. There was substantial excess capacity in public manufacturing enterprises, many of which were heavily constrained by lack of imported intermediates and working capital.10

Only Tunisia and Mauritius with their two-track approach were able to sustain the pace of industrial growth. In Mauritius, manufacturing value added grew at about 17 percent per year between 1970 and 1980. Manufactured exports increased from zero to nearly 25 percent of total exports over the same period, and by 1985 apparel exports from the EPZ had overtaken sugar as the island’s main foreign exchange earner.11 In Tunisia, manufacturing grew at more than 15 percent per year throughout the 1970s. Between 1972 and 1977, 85,500 new jobs were created in manufacturing.

11. ACET (2014).

In the early 1970s economists began to document the efficiency costs of excessive protection of the domestic market, and state-owned enterprises came under critical scrutiny.\(^\text{12}\) Import substitution was increasingly viewed as a high-cost path to industrialization and public enterprises were widely found to be less efficient than privately owned firms.\(^\text{13}\) Mainstream development economics moved from a focus on the potential failings of markets in developing countries to embrace a “market friendly” approach to public policy.\(^\text{14}\)

A consensus—at least among the U.S. Treasury, the Federal Reserve, the International Monetary Fund (IMF), and the World Bank—emerged on the policies considered appropriate for developing countries. These included:

— Fiscal discipline
— Tax reform (to reduce marginal rates and broaden the tax base)
— Interest rate liberalization
— A competitive exchange rate
— Trade liberalization
— Liberalization of foreign direct investment
— Privatization
— Deregulation (ending barriers to entry and exit)
— Secure property rights
— Public expenditures focused on primary health care, primary education, and infrastructure

\(^{12}\) The major contributions to this literature were from Little, Scitovsky, and Scott (1970) and their colleagues at the OECD Development Centre; Balassa (1971) and his colleagues at the World Bank; and Bhagwati (1978) and Krueger (1978) at the NBER. For a recent contribution to the analysis of the complex measurement issues involved, see Jensen, Robinson, and Tarp (2010).

\(^{13}\) See, for example, World Bank (1983).

\(^{14}\) The term “market friendly” is from former World Bank chief economist Larry Summers. For a summary of the mainstream views on the role of markets in development, see the World Bank (1991).
John Williamson famously termed this list the “Washington Consensus,” and it became the playbook for stabilization and structural adjustment lending by international financial institutions (IFIs), mainly the IMF and the World Bank.\textsuperscript{15}

The Washington Consensus quickly found its way to Africa.\textsuperscript{16} External shocks had left Africa’s early industrializers with flagging economic growth and chronic foreign exchange shortages. Governments attempted to sustain growth through expansionary macroeconomic policies leading to widespread loss of fiscal and monetary control. Exchange rates became seriously overvalued, and most governments responded to the lack of foreign exchange by introducing exchange controls and rationing. Growth ground to a halt, and African governments turned to the IFIs. By 1988, eighteen African countries had initiated stabilization and structural adjustment programs with the World Bank and the IMF, and an additional fourteen had borrowed from the World Bank to support reforms at the sector level.\textsuperscript{17}

The initial focus of public policy advice and conditionality in Africa was on macroeconomic stabilization. Better macroeconomic policies were defined as “keeping budget deficits and inflation low, establishing fully convertible currencies and competitive exchange rates, and increasing public savings.”\textsuperscript{18} Policy reforms designed to improve resource allocation—liberalization of trade and finance and regulatory reform—followed closely behind stabilization. Between 1985 and 2000, more than thirty African countries adopted adjustment programs that incorporated exchange rate and trade policy reforms.\textsuperscript{19}

Privatization also became a major policy objective. Divestiture of state-owned enterprises was viewed as important for two reasons. First, it reduced the actual or contingent drain on the budget

\begin{footnotesize}
\textsuperscript{15} Williamson (1990).
\textsuperscript{16} See Tarp (1993).
\textsuperscript{17} World Bank (1992).
\textsuperscript{18} World Bank (1992, p. 184)
\textsuperscript{19} World Bank (2000).
\end{footnotesize}
imposed by poor investment choices. Those enterprises that failed to elicit interest from private investors would be closed and liquidated as part of the fiscal consolidation. Second, the state had proved to be a poor entrepreneur. Even where firms were breaking even or providing a positive return to capital, the opportunity cost of the scarce managerial resources committed by the state to the public enterprises was high.20

In 1979 Senegal was the first to turn to the IFIs for a stabilization and structural adjustment program. Ghana, another pioneer, introduced its economic recovery program in April 1983. In Tanzania, an economic recovery program was adopted in the mid-1980s with the twin objectives of restoring macroeconomic stability and accelerating structural reforms. During the 1980s and 1990s, Kenya implemented several structural adjustment programs, and between 1986 and 1993, the IMF and World Bank supported a full range of Washington Consensus reforms in Nigeria. Mozambique began an economic rehabilitation program in 1987. Extensive trade and exchange rate reforms began in Uganda in 1987, and soon after it seized power in 1991, Ethiopia’s new government announced that it would return to a market-led economy, supported by a structural adjustment program.

Even Mauritius and Tunisia did not escape. Between 1980 and 1986, Mauritius entered a stabilization and structural adjustment program with the IMF and the World Bank. The island’s economy had combined the EPZ with a domestic manufacturing sector that was highly protected. Starting in the early 1980s, the government began to dismantle most of the quantitative restrictions that had sheltered the non-EPZ part of the economy from foreign competition. In the early 1990s there was significant tariff reform as well.21

At the end of the 1970s, Tunisia’s foreign debt ballooned and the economy began to slow. Growth decelerated further in the period 1981–86, reaching its lowest average rate in decades, 2.8 percent per year, and productivity declined. Faced with growing internal im-

balances and ballooning external debt, Tunisia negotiated its first structural adjustment program in 1986. The program, which was in place from 1986 to 1990, featured tariff reductions, elimination of quantitative restrictions on imports, devaluation of the Tunisian dinar, and negotiations with creditors to extend the maturity on the country’s foreign debt.

**Structural Adjustment without Structural Change**

Perhaps no episode in Africa’s contemporary economic history generates as much debate and strong feeling as the structural adjustment period. Many countries—including those covered by our country studies—made major gains in macroeconomic management. By 1997 fiscal deficits in the thirty-one countries covered by the World Bank’s Special Program of Assistance for Africa had dropped to 5.3 percent of GDP and averaged only 2.5 percent of GDP net of grant financing. According to one estimate, the median African currency was 82 percent overvalued in purchasing power parity (PPP) terms in 1980. Between 1980 and 2000, there was a steady trend toward real devaluation of the exchange rate in most countries (including a major devaluation of the French-supervised CFA franc in 1994). By the early 1990s, the currency in the median African country was at PPP parity or undervalued.

Across the Continent, governments liberalized trade, engaged in some deregulation of the domestic market, attempted to restructure state enterprises, and finally turned to privatization. Quantitative restrictions, once widespread, were replaced by tariffs. Tariffs were steadily lowered in most countries and their dispersion reduced. Average rates of 30 to 40 percent in 1980 had fallen to trade-weighted average tariffs of 15 percent or less by 2000. Privatization was more controversial—and less vigorously pursued—than either macroeconomic stabilization or trade liberalization.

The relationship between structural adjustment and industrial development was remarkably consistent across countries. The decline in industry—and in particular manufacturing—occurred in every country before structural reforms were undertaken. Indeed, the need to respond to a shortfall in manufacturing production was often one of the motivations for governments to undertake reforms. The early liberalizations of the foreign exchange market and the adjustment of exchange rates provided a temporary stimulus to industrial production, as firms increased utilization of capacity that had been heavily constrained by lack of imported intermediates and capital goods. During the period 1985–90, manufacturing output growth shifted from negative to positive in Ghana, Nigeria, and Tanzania, and growth accelerated in the remaining countries except Ethiopia and Tunisia.

The recovery was short-lived, however. Increased competitive pressure from imports and rising production costs due to reforms in the foreign exchange and financial markets put considerable pressure on manufacturing enterprises. Import competition, lack of technical expertise, and the shortage of working capital resulted in most government-owned firms operating at as little as 10 percent of capacity. This trend was particularly acute in Ghana, Nigeria, and Tanzania and continued until the late 1990s when most state-owned firms were shut down awaiting privatization. By 1995 manufacturing growth rates had fallen below their 1985–90 averages, in some cases quite dramatically. In Ghana, for example, average growth of manufacturing went from 7.5 percent in the late 1980s to −7.4 percent in the early 1990s. Tanzania and Uganda were the exceptions. In Tanzania, average manufacturing-sector growth accelerated from −0.02 percent in 1990–95 to 5.7 percent in 1995–2000, and in Uganda manufacturing growth exceeded 10 percent per year throughout the 1990s.

In Mauritius the reforms, combined with active programs to support exporting firms, gave another boost to exports. Manufactured exports grew on average about 5 percent per year in the 1990s.

Local investors operating as contract manufacturers set up apparel businesses clustered around larger, mainly foreign firms. The Development Bank of Mauritius, a public development bank, provided capital to domestic EPZ investors. The government also built several industrial estates around the island and leased sites to investors at subsidized rates. By 2000, Mauritian companies owned about 60 percent of the apparel industry, and garments from the EPZ had reached 76 percent of total exports. Some firms had started to integrate their businesses vertically by producing textiles—spinning and weaving—as well as garments, and a few firms began to “offshore” their most labor-intensive manufacturing processes to neighboring countries such as Madagascar.27

Spurred by anemic manufacturing growth in the late 1980s, the government in Tunisia began the process of entering into a free trade agreement (FTA) with the European Union—one of the Euro-Mediterranean agreements—in the early 1990s and concluded the FTA in 1998. Liberalization of the domestic economy put increased competitive pressure on firms serving the local market. The government encouraged the modernization of the industrial sector through the EU-supported Programme de mise à niveau, launched in 1996. An industrial modernization program followed. The industrial sector responded with modest growth of about 6 percent per year during the period 1995–2000, led by rapid growth of exports. Exports to EU countries grew more than 10 percent annually.

Investment Climate Reform (2000 to Present)

By 2000 the stabilization programs in most countries had restored unified and appropriately valued exchange rates. Fiscal deficits were coming under control and inflation was beginning to subside. Africa began to experience its first positive per capita income growth around 1995, a trend that would accelerate through the first decade of the twenty-first century. Improved economic performance and increasing criticism of the Washington Consensus led to a retreat

27. ACET (2014).
from structural adjustment lending. The World Bank and many bilateral donors shifted their focus to the “investment climate”—the policy, institutional, and physical environment within which firms operated.

As defined by Nicholas Stern, the World Bank’s chief economist in the early 2000s, the investment climate included (i) macroeconomic stability and openness; (ii) good governance and strong institutions, including the rule of law, control of corruption and crime, regulatory quality, and the effectiveness of public services; and (iii) the quality of the labor force and infrastructure. In principle, programs to improve the investment climate would help consolidate the macroeconomic gains of the structural adjustment period, strengthen policy and institutional reforms, and allow some space for governments to set new priorities in public expenditure in the areas of infrastructure and education.

Most African countries have implemented a number of investment climate reforms since 2000. Ghana’s industrialization strategy has prominently featured investment climate reforms focused on macroeconomic policies, trade policies, and reforms to the regulatory framework. In Kenya, investment climate programs were undertaken to improve power supply, liberalize the overall regulatory climate, and introduce tax reforms. Ethiopia’s Industrial Development Strategy, formulated in 2003, focused on macroeconomic stability, access to finance, dependable infrastructure, and skilled and effective human resources. Since completing its adjustment program, Nigeria’s approach to industrial development has sought to make the industrial sector internationally competitive, reduce the role of the government in the direct production of goods, and strengthen its role in regulation and export promotion.

The 2005 Senegal Accelerated Growth Strategy set as its principal objective establishing a business environment consistent with international good practice. In 2007 Mozambique adopted a new Industrial Policy and Strategy in which a significant role was assigned

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Industrialization efforts have been aimed at promoting private investment. Uganda’s National Industrial Policy, published in 2008, highlights reforms such as development of efficient and reliable infrastructure, promotion of entrepreneurship, and development of a skilled labor force, and in 2010 Tanzania introduced an Integrated Industrial Development Strategy aimed at creating a competitive business environment, improving existing development corridors, and concentrating infrastructure development on constraints to industrial growth.

Investment climate reform also played a prominent role in Tunisia. While the government continued its programs of gradual liberalization of the domestic economy and industrial upgrading, the World Bank, the African Development Bank, and the European Union engaged in a series of joint development policy lending operations in the mid-2000s, designed in part to improve the investment climate. As in Africa south of the Sahara, the centerpiece of these investment climate reforms was regulatory reform and, to lesser degree, upgrading of the institutions dealing with the private sector.29

Mauritius chose to continue to take a more active approach to industrial development. Beginning in the mid-1990s the export strategy came under severe stress from rising wages and the phasing out of the Multi-Fiber Arrangement. Many Asian-based investors left when their tax holidays lapsed. In response, the Mauritius Export Development and Investment Authority increased efforts to find new markets and new investors for the EPZ. The Mauritius Standards Bureau and the Industrial and Vocational Training Board responded to the needs of the textile and clothing sector, and the University of Mauritius became involved in developing skills and technology for clothing. Computerized sewing and stitching machines, backed by rigorous quality systems like ISO 9000,

29. Ironically, the World Bank (2008b) praised the Ben Ali government, now widely condemned for its legacy of crony capitalism, as a leading reformer in its Doing Business report the year before the Jasmine Revolution. See Page (2012b).
became a priority for most companies. A Mauritius Technology Diffusion Scheme provided grants to firms that wanted to procure technical services to improve productivity, quality, and design and promote quality assurance standards and systems in garments. Mauritian textile and clothing exports grew 25 percent between 2005 and 2012.30

Not Yet a Turning Point

The widespread adoption of investment climate reforms has not reversed the decline in African manufacturing. Since 2000 industrial performance in the countries covered by L2C has been uneven. The good news is that there appears to have been some acceleration in the growth rate of manufacturing in Ethiopia, Kenya, Nigeria, and Tanzania. On the other hand, growth of manufacturing in Ghana and Senegal has remained low and has lagged the overall growth of the economy. Mozambique had very rapid manufacturing growth during 2000–05, driven mostly by the Mozal Aluminum Smelter Mega Project, which came to an abrupt end during 2005–10. In Uganda, manufacturing growth averaged more than 6 percent per year during 2000–10, but this represented a major slowdown from the pace of industrialization in the 1990s. For sub-Saharan Africa as a whole, manufacturing growth has been less than the growth of GDP since the turn of the century.

In both Mauritius and Tunisia there are indications that the structural shifts in sectors and industries that we would expect of a middle-income country are taking place. The manufacturing sector in Mauritius has been growing more slowly than GDP since 2000, and the share of manufacturing has declined to about 20 percent of total output. The service sector, including tradable services, has now become the dominant sector of the economy. In Tunisia manufacturing growth after 2000 slowed to the range of 2 to 5 percent per year. This was accompanied by rapid development of the service sector, including information technology (IT) based services and tourism.

30. ACET (2014).
Bad Luck or Bad Policy?

Africa’s failure to industrialize is partly due to bad luck. The terms of trade shocks and economic crises of the 1970s and 1980s brought with them a twenty-year period of macroeconomic stabilization, trade liberalization, and privatization. Uncertainty with the outcome of the adjustment process and low or negative economic growth meant that there was little private investment overall and practically none in industry. Political instability and conflict also caused investors to hold back. When Africa emerged from its long economic hibernation just before the turn of the twenty-first century, African industry was no longer competing with the high-wage industrial “North,” as it had in the 1960s and 1970s. It was competing with China. From the point of view of industrial development, the timing of the region’s economic recovery was unlucky, to say the least.

Stabilization and fiscal austerity left Africa with very large gaps in infrastructure and human capital relative to emerging Asia. Africa started out in the 1960s with stocks of roads that were generally not very different from those in South or East Asia. The same was true in the 1970s for telephones and in the 1980s for power. By around 2000, Africa trailed in every infrastructure category. The comparison with South Asia is particularly telling. In 1970 sub-Saharan Africa had almost three times the generating capacity per million people as South Asia; in 2000 South Asia had almost twice the generation capacity per million people. In 1970 sub-Saharan Africa had twice the main-line telephone density of South Asia, but by 2000, the two regions were equal.31 The political and economic turmoil of the 1980s and 1990s also took a toll on the region’s institutions. In 2000 sub-Saharan Africa trailed all other developing regions in terms of government effectiveness, regulatory quality, rule of law, and control of corruption, in some cases by wide margins.32

31. Foster and Briceño-Garmendia (2010).
The absence of these “basics,” to which we shall return in chapter 7, meant that Africa’s initial conditions in 2000 were, if anything, less auspicious than after independence. The World Bank began conducting Enterprise Surveys in Africa in the late 1990s. The legacy of poor infrastructure, low human capital, and dysfunctional institutions emerges clearly in those surveys. Self-reported losses associated with power outages amounted to more than 10 percent of sales in some countries. Bad transport networks emerged as a second infrastructure constraint. Around one-third of firms cited transportation as a major or severe constraint. Firms also reported having to pay bribes to get things done. On average, around 40 percent of African firms in the surveys stated that bribes were common.\(^{33}\)

Several studies show the adverse impact of these physical and institutional deficiencies on productivity. Eifert and others distinguish between factory-floor productivity and overall productivity. They find that sub-Saharan African firms are substantially less productive, relative to firms in comparator countries, when “indirect costs” such as power, transport, licensing fees, and bribes are included. Kenyan firms, for example, have about the same factory-floor productivity as firms in China but only about half of the overall productivity when indirect costs are taken into account. Harrison and others find that once allowance is made for the quality of infrastructure and institutions, the productivity of African firms is similar to that of firms in other countries.\(^{34}\)

The failure to industrialize, however, was also due to bad policy. Import substitution sowed the seeds of its own destruction. High protection and heavy import dependency meant that African industry was poorly prepared for international competition. The tendency of many African governments to assign a leading role to the state in creating and operating manufacturing firms simply made the problem worse. Investments were often made with little regard to efficiency, and the managerial capacity of the state was badly overstretched. The reforms of the structural adjustment period


\(^{34}\) See Eifert and others (2008) and Harrison and others (2012).
eventually paid off in terms of better macroeconomic management, but adjustment costs in terms of lost growth were high, and the rapid liberalizations of trade, together with some ill-advised conditions—such as freeing up the import of secondhand clothing for resale—probably caused a more severe contraction of industry than was necessary.

Hindsight is always easy. The key issue today is: Does the current focus on investment climate reform prepare Africa to turn the corner in industrial development? The evidence is not promising. Despite a decade and a half of investment climate reform, most African countries have not reached a turning point in their industrial development. In our view this partly reflects the fact that the investment climate reform agenda was poorly designed and implemented. Although in principle efforts to improve the investment climate were supposed to cover the whole range of issues—from macroeconomic management, to infrastructure and skills, to the policies and institutions that most closely affect private investors—in practice investment climate reform has centered too narrowly on business regulation at the expense of the “basics.”

Our country case studies raise a further question: Is investment climate reform alone equal to the task? The two African countries—Mauritius and Tunisia—that went their own way in terms of policies for industrialization have on the whole succeeded in industrializing. The source of their early industrial dynamism came from rapid growth of export manufacturing and only relatively late in the game did they begin to expose domestic firms to greater competition from imports. Both countries also actively supported exporters and industry more generally, developing programs to encourage diversification and increase firm-level productivity. It is fair to say that neither industrialization story is an unqualified success. Both countries have had some difficulty in making the transition from

35. It commonplace for scholars in East Asia to point out that countries such as China and Vietnam have sustained high rates of industrial and economywide growth while performing poorly on widely used indicators of regulatory quality and governance (Page, 2015).
low-end manufacturing toward more sophisticated and technology-intensive goods. They are, however, the leading African industrializers, relative to the rest of the Continent. This suggests that in addition to improving institutions, skills, and infrastructure, more active industrial policies may be needed in the rest of Africa.

**Summing Up**

Africa’s industrial stagnation is a consequence of both bad luck and bad policy: bad luck came in the form of a vastly changed global competitive environment, and poor initial conditions. Once the reforms of the adjustment period had begun to pay off at the turn of the twenty-first century, Africa found itself competing with China. The fiscal austerity and political uncertainty of the 1980s and 1990s left the region with deficits in infrastructure, human capital, and institutions that made industrialization more difficult. But part of the responsibility also rests with the design and implementation of public policy.

There is a remarkable similarity in the policies for industrial development followed by sub-Saharan African countries: state-led import substitution, structural adjustment, and reform of the investment climate. In part, this can be ascribed to the similar stages of industrial development of most African economies and to the prevailing thinking among development economists with respect to appropriate policies to promote industrial development. Since the structural adjustment period, it is also partly due to the influence of aid donors. State-led import substituting industrialization led to a short-lived boom but could not be sustained, contributing to the macroeconomic collapses of the 1980s and the arrival of the Washington Consensus. African governments can look back on the structural adjustment period with some degree of relief. Improved macroeconomic management and the opening of the region’s economies to international competition were important steps toward building more efficient economies, but they contributed little to industrial development.
Investment climate reform, like the structural adjustment that came before it, reflects the priorities of the international financial institutions and the aid community. As implemented, investment climate reforms have not succeeded in reversing the region’s industrial decline. Setting new priorities for the investment climate is certainly possible—and we make some suggestions how to do that in chapter 9—but changes in the investment climate alone are unlikely to be enough to overcome the challenge of industrialization, in much the same way that “getting prices right” was too narrow an approach to ensure a growth turnaround in the 1980s. Mauritius and Tunisia largely emulated the East Asian model of export-led manufacturing growth. Arguably they have succeeded where the rest of the Continent has failed, and their success gives some insight into what needs to be done in order for the rest of Africa to industrialize. Before we return to policy, however, it is important to try to understand the realities of industrial development in the twenty-first century. We begin in the next chapter by taking up the question of whether Africa can break into the global market for industrial goods.
