



# **CREATING DECENT JOBS**

## **STRATEGIES, POLICIES, AND INSTRUMENTS**

POLICY RESEARCH DOCUMENT 2

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## CONSTRAINTS TO EMPLOYMENT CREATION IN AFRICA

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*This study explores supply- and demand-side barriers to employment creation in Sub-Saharan Africa. It focuses on five low- and low-middle-income countries with grave underemployment problems: Benin, Burkina Faso, Ethiopia, Ghana, and Senegal. African labor markets are characterized by a sharp dualism between little formal employment and much informal employment—80–95 percent in low-income countries. Vulnerable employment is also 80–90 percent, and higher for women. The agricultural and urban informal sectors feature pervasive underemployment. Workers in small informal firms typically earn about one-fifth of the earnings of employees in formal firms, and absolute poverty remains high in four of the five focus countries.*

The supply of labor is expanding rapidly due to high population growth. But skill mismatches between potential employees and firms due to lack or poor quality of education and training contribute to low levels of formal employment. And people with higher education in the focus countries have higher nonemployment rates than the population as a whole, because the education system focuses on preparing students for the civil service and fails to impart the practical skills sought by employers. Vocational training must also be improved and coordinated with the private sector to ensure that workers receive training useful to employers.

Labor-intensive sectors need to grow to demand skilled workers. Manufacturing for export is not the only vehicle to achieve this—agricultural exports, tourism, and fishing are alternatives, since they are labor-intensive, confront the quality requirements of developed-country markets, and


are subject to technological upgrading. Attracting foreign investment and technology while keeping wages low until productivity rises is key.

Supportive government policies and a reasonably well-functioning business climate are crucial to successful low-income exporters. Long-term improvements in economy-wide infrastructure and institutions can be supplemented by short-cuts through export processing zones, regional growth poles, and business incubators.

### INTRODUCTION

Improving employment opportunities is desirable in itself and crucial to poverty reduction. In Sub-Saharan Africa, although people have jobs—they are simply too poor not to work—underemployment is pervasive. Typically,





90 percent or more of the labor force works in the informal sector in subsistence agriculture, urban self-employment in petty services, and similar activities. African labor markets are marked by large disparities between a small number of formal public and private employees and a vast number of informal sector workers with very low pay, no job security, minimal benefits, and, often, hazardous working conditions.

Impediments to both the supply of and the demand for labor account for Africa's lagging performance in creating formal sector jobs. Human capital deficiencies due to inadequate education and training diminish the supply, while the product market provides too little demand.

On the supply side, although countries have made major strides in educational attainment, schooling and training programs often fail to provide the skills that employers seek. On the demand side, although economic growth in Africa has picked up since the early 1990s, it has occurred mostly in informal services and in capital-intensive sectors, such as natural resource extraction. Neither has led to much growth of formal sector employment opportunities. Firms cite corruption, lack of infrastructure, and pervasive red tape and labor-market regulations as the greatest barriers to investment and job creation.

This study explores supply- and demand-side barriers to employment creation in Sub-Saharan Africa. It focuses on five low- and low-middle-income countries with grave underemployment problems: Benin, Burkina Faso, Ethiopia, Ghana, and Senegal. The five are not resource abundant and so are not subject to the resource "curse." And they have not been so disrupted by social strife as to preclude economic development. In other respects, they are diverse enough to illuminate the general nature of the Sub-Saharan underemployment problem. Four other countries serve as comparators: China, Bangladesh, Mauritius, and Viet Nam. Mauritius is one of the few African countries to have successfully lowered poverty through employment creation. Bangladesh, China, and

Viet Nam, likewise, have recently achieved rapid formal employment increases starting from very low incomes. The study argues that governments should adopt policies that raise the demand for African labor, while also improving worker training and building entrepreneurs' skills.

The study combines qualitative and quantitative analysis of labor markets in the five focus countries and four comparators. It describes the evolution of employment in the countries under study and discusses labor supply constraints and impediments to labor demand due to the business environment. It represents case studies of the five focus countries, including policy recommendations. Finally, the study offers conclusions and policy recommendations.

## **THE PREVALENCE OF INFORMAL AND PRECARIOUS EMPLOYMENT IN AFRICA**

Open unemployment is often 5 percent or less of the labor force in Sub-Saharan Africa.<sup>1</sup> The problem is the quality rather than the quantity of jobs: the vast preponderance of the labor force is employed in the informal sector. Casual observation highlights how few employees receive regular wages and benefits—instead, street hawkers typify city employment, and subsistence farmers typify agriculture.

The informal sector is complex, with a continuum of characteristics, such as firm size, tax payments, registration, access to credit, and stability of work location.<sup>2</sup> Likewise, informal employment has a variety of characteristics.<sup>3</sup> Sometimes, it is defined as less than full-time work—but many informal workers work long hours. Sometimes, it is identified with self-employment and work in household enterprises. Lack of regular wage payments and absence of social insurance coverage are often features—but some workers in formal firms may be subject to these conditions, and some self-employment is quite remunerative. And these definitions overlap substantially. But typically,

self-employed and family workers have irregular hours and do not receive wage payments or any form of official social security protection.

African employment data are sparse and usually out of date. The very concepts of labor force participation, employment, and unemployment used in developed economies are problematic in low-income Africa.<sup>4</sup> Nevertheless, the available information paints a consistent pattern: African labor markets are characterized by a sharp dualism between very small formal employment and much informal employment. The agricultural and urban informal sectors feature pervasive underemployment.

Sub-Saharan labor force participation rates are not dramatically different from those in other developing regions. They are slightly lower for men than in Latin America and South Asia. And they are, surprisingly, higher for women, though lower than in East Asia. Labor force participation has not increased over time in Africa, unlike in many other areas, and has even fallen in some countries. For example, in Benin, it stayed around 72 percent from 2000 to 2016. Moreover, the distinction between being in or out of the labor force is hazy, given the substantial number of domestic workers incorrectly counted as out.

In Sub-Saharan low-income countries, informal employment accounts for at least 80 percent of total employment, and often 90–95 percent (informal employment is defined here as agricultural work, non-wage employment, and part-time wage employment; table 1).<sup>5</sup> In half the countries in table 1, government employment exceeds formal private sector employment, whereas in the other half, the opposite is true. In all the countries, however, both formal private and government employment are less than 15 percent of the labor force, and they are often less than 5 percent. In urban areas, informal employment (with agriculture excluded) predominates and has risen over time (table 2).

Since informality is a matter of degree, the share of employment counted as informal is a rough

**TABLE 1**

**Distribution of employment by sector in selected Sub-Saharan low-income countries**

*Percent of the labor force*

Country/year of survey	Public sector	Formal private sector	Informal sector
Benin, 2005	2.6	2.1	95.3
Burkina Faso, 2005	4.3	1.0	94.7
Cameroon, 2005	4.9	4.7	90.4
Congo, 2005	6.3	1.8	91.9
Ethiopia, 2005	3.9	6.2	89.9
Ghana, 2010	6.4	7.0	86.6
Madagascar, 2005	—	—	86.5
Malawi, 2004	9.0	11.5	79.5
Mali, 2007	3.1	0.4	96.5
Nigeria, 2004	8.0	0.3	91.8
Rwanda, 2006	3.7	1.2	95.1
Senegal, 2001	1.8	6.1	92.1
Tanzania, 2006	3.0	1.5	95.5
Uganda, 2006	2.8	14.2	83.0
Zambia, 2005	5.2	6.8	88.0

Source: Golub and Hayat 2015.  
— is not available.

**TABLE 2**

**Urban informal employment in four African focus countries**

*Percent of total urban employment*

Country	1980s	2010s
Benin	—	96.2
Burkina Faso	70.0	88.4
Ghana	—	77.7
Senegal	76.0	87.0
Sub-Saharan Africa average	67.3	73.3

Source: Charmes 2018.  
— is not available.

estimate. In agriculture, a few large plantations can be classified as formal, and even small-scale farming may share some aspects of formal organization and social protection, such as stabilization of producer prices for commodities, as for cocoa in Ghana. Furthermore, the informal sector is heterogeneous.<sup>6</sup> A few informal firms have large sales volume but operate as informal in most other respects. Analysts such as Mbaye and coauthors

often split informal firms into large and small. Large informal firms exceed \$100,000 in annual sales yet fulfill other criteria of informality and pay little or no tax—nevertheless, they play a major role in some sectors. Small informal firms far outnumber large ones. “Vulnerable employment” is defined by the International Labour Organization (ILO) as self-employment and contributing family workers—similar but not identical to underemployment or informal employment. Adding vulnerable employment to unemployment provides a measure of a country’s precarious employment status. In the five focus countries, the rate of precarious employment was about 90 percent in 1991, except in Ghana, where it was about 80 percent

(table 3). The rate remained elevated until 2015, although Ghana and especially Senegal exhibited steady improvement (alternative measures suggest that the improvement in Senegal may be overstated). Ethiopia improved somewhat over 2010–13.<sup>7</sup> Benin and Burkina Faso’s precarious employment share remained around or above 90 percent. The level of precariousness in West Africa is also shown in the 40 percent of workers earning below the minimum wage—in Burkina Faso, 61 percent.

For women, employment precariousness was even worse, with vulnerable employment constituting about 95 percent of women’s employment in Benin and Burkina Faso in 2016 (table 4).<sup>8</sup> In Senegal, the improvement for women over 1990–2016 is less marked than for total employment.

**TABLE 3**  
**Vulnerable employment plus unemployment in African focus countries**

*Percent of the labor force*

Year	Benin	Burkina Faso	Ethiopia	Ghana	Senegal
1991	89.8	96.6	89.1	78.9	90.0
1992	88.8	96.6	88.7	78.3	82.6
1993	88.7	96.6	90.0	78.8	81.9
1994	88.8	96.3	90.9	78.6	82.6
1995	88.7	95.9	90.9	77.9	81.7
1996	88.3	95.0	90.6	77.6	82.1
1997	88.1	94.8	89.2	77.9	81.9
1998	87.9	94.4	90.6	77.5	81.0
1999	88.9	94.9	92.0	77.8	80.2
2000	88.8	94.7	92.6	77.9	80.1
2001	88.7	94.2	92.8	76.6	80.1
2002	88.3	93.9	93.1	76.8	76.4
2003	88.5	93.9	93.4	75.4	75.8
2004	90.4	94.5	92.9	74.2	75.8
2005	90.4	93.9	91.9	73.9	74.2
2006	90.3	93.5	94.0	75.5	75.2
2007	90.3	94.1	93.6	79.4	75.3
2008	90.1	92.8	92.5	77.6	74.0
2009	90.1	93.4	91.8	77.8	73.5
2010	90.2	93.3	91.9	76.7	72.8
2011	90.3	93.4	91.2	72.7	74.2
2012	90.2	92.8	90.0	72.2	73.4
2013	90.1	92.7	89.9	71.7	73.6
2014	89.8	92.6	—	71.2	73.1
2015	89.7	92.5	—	71.0	72.6

Source: World Bank jobs data, based on ILOSTAT, 2017.  
— is not available.

The comparator countries show a rather different picture (table 5). In Mauritius, the employment situation had already improved before the 1990s, reflecting rapid development based on labor-intensive exports of garments in earlier decades. Bangladesh, China, and Viet Nam showed dramatic improvements over 1991–2015, also reflecting their rapid export-led growth. The improvements for women in the comparator countries were similar to the economy-wide averages, since women are often employed in manufacturing plants in Asia.

The huge disparities in remuneration between formal and small informal firms are evident in data gathered through enterprise surveys in the largest cities in five African countries (table 6).<sup>9</sup> Employees in formal firms typically earn about five times more than workers in small informal firms. In the small informal firms, monthly incomes are generally a little more than \$100 a month, which undoubtedly leaves many of the families of these workers below the \$2 per day poverty threshold. Incomes in large informal firms are typically between those of formal and small informal firms—closer to those in formal firms in Burkina Faso, Gabon, and Senegal, and closer to those in small informal firms in Benin. If agriculture and smaller urban areas were included, mean informal

**TABLE 4****Female vulnerable employment in African focus countries***Percent of female employment*

Year	Benin	Burkina Faso	Ethiopia	Ghana	Senegal
1991	95.8	98.7	91.0	88.6	92.2
1992	95.6	98.7	90.6	88.4	86.8
1993	95.5	98.7	91.8	88.5	86.3
1994	95.5	98.6	92.8	88.2	86.8
1995	95.5	97.9	92.8	87.9	86.2
1996	95.3	97.4	92.4	87.5	86.2
1997	95.2	97.3	91.3	87.7	86.0
1998	95.1	97.0	92.6	87.3	85.8
1999	95.7	97.1	93.3	87.0	85.2
2000	95.5	97.1	94.4	86.8	84.7
2001	95.5	96.8	94.3	86.5	84.7
2002	95.3	96.6	94.5	86.2	86.4
2003	95.2	96.6	94.8	85.7	85.5
2004	95.8	96.5	94.4	85.1	85.5
2005	95.7	96.1	93.5	84.8	84.3
2006	95.7	96.1	95.5	85.4	84.6
2007	95.5	96.2	95.2	85.3	84.8
2008	95.3	95.4	94.3	84.9	83.4
2009	95.2	95.8	93.7	84.1	82.6
2010	95.4	95.8	93.7	83.8	82.2
2011	95.3	95.8	93.1	82.4	82.9
2012	95.2	95.4	91.9	81.5	82.1
2013	95.1	95.2	92.0	80.7	82.2
2014	94.9	95.1	53.1	80.1	81.7
2015	94.8	95.1	53.0	79.8	81.1
2016	94.8	95.0	51.8	79.3	80.2

Source: World Bank jobs data, based on ILOSTAT, 2017.

**TABLE 5****Vulnerable employment and unemployment in comparator countries***Percent of the labor force*

Year	Bangladesh	China	Mauritius	Viet Nam
1991	86.9	74.9	23.1	87.8
1992	87.1	73.3	17.1	87.8
1993	85.9	67.9	18.1	87.5
1994	85.8	64.5	18.5	87.3
1995	85.5	60.7	22.8	86.0
1996	84.6	58.0	22.4	82.3
1997	86.9	56.6	23.1	82.6
1998	85.5	56.0	23.1	79.6
1999	85.7	55.3	24.3	82.3
2000	84.8	54.3	24.8	81.5
2001	87.0	53.5	22.5	80.0
2002	86.8	52.5	23.1	79.6
2003	86.7	50.3	23.4	78.4
2004	88.0	48.0	23.9	74.4
2005	87.1	46.3	24.8	73.9
2006	69.8	44.8	23.9	72.3
2007	68.2	43.3	24.1	71.0
2008	66.3	41.4	22.4	69.5
2009	65.8	40.5	22.0	68.9
2010	64.8	39.4	22.6	67.6
2011	63.6	38.2	22.0	65.3
2012	62.4	37.6	24.0	63.1
2013	61.0	37.1	23.6	63.1
2014	60.0	36.5	23.5	62.7
2015	59.0	35.9	23.5	58.8

Source: World Bank jobs data, based on ILOSTAT, 2017.

**TABLE 6****Average monthly incomes in urban formal and informal sectors in African focus countries, around 2015**

\$

Country	Formal	Large informal	Small informal
Benin	674	227	104
Burkina Faso	646	426	143
Cameroon	533	324	104
Gabon	539	410	115
Senegal	671	441	116

Source: Based on surveys conducted for Mbaye and Golub (forthcoming).

Note: The surveys were conducted in the major cities of each country: Dakar (Senegal), Cotonou (Benin), Ouagadougou (Burkina Faso), Douala and Yaounde (Cameroon), and Libreville (Gabon).

incomes would likely be even lower. These data confirm the dualism of labor markets in low-income Sub-Saharan Africa: a few remunerative formal sector jobs and somewhat well-paying large informal sector jobs versus a mass of small informal employment with subsistence-level earnings.

Consequently, poverty in the focus countries, though it fell, remained quite high between 1990 and around 2015, except in Ghana, where it fell considerably (table 7). (Poverty here is absolute poverty—households subsisting on \$1.90 a day or less in 2011 purchasing power parity.) Among the comparator countries, absolute poverty was largely eradicated by the 2000s in China, Mauritius,



**TABLE 7****Poverty rates in African focus countries and comparator countries***Percent of population*

Country	1990–94	1995–99	2000–04	2005–09	2010–16
<b>Africa</b>					
Benin	—	—	48.8	—	49.6
Burkina Faso	83.1	81.6	57.3	55.3	43.7
Ethiopia	67.1	55.5	36.4	33.6	26.7
Ghana	49.8	35.7	25.7	19.6	12.0
Senegal	68.4	—	49.2	24.5	38.0
<b>Comparators</b>					
Bangladesh	44.2	35.7	36.4	19.6	14.8
China	66.6	40.5	18.7	14.7	1.4
Mauritius	—	—	—	0.4	—
Viet Nam	52.9	35.5	26.5	14.8	2.6

Source: World Bank jobs data, based on ILOSTAT, 2017.

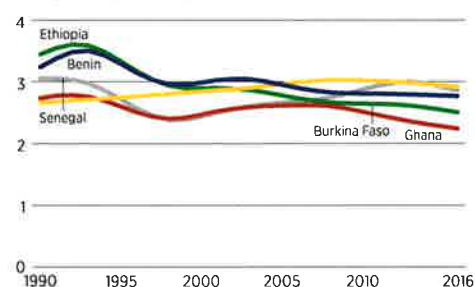
Note: Poverty is based on the threshold of \$1.90 per day in household income, in 2011 purchasing power parity.  
— is not available.

and even Viet Nam, and in Bangladesh, dropped steeply in the 2000s to below 15 percent. Creating more remunerative and stable employment opportunities is decisive for reducing poverty rapidly.

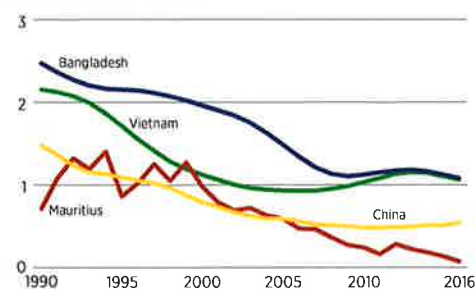
## IS LABOR SUPPLY CONSTRAINING EMPLOYMENT CREATION IN AFRICA?

The labor force in low-income African countries is expanding rapidly due to high population growth. In the African focus countries, population growth was around 3 percent a year in 1990. Over the next 25 years it fell in Ethiopia and Ghana, and to a lesser extent Benin, but remained well above 2 percent; it did not fall for Burkina Faso or Senegal (figure 1).

In contrast, China and Mauritius's already low population growth rate declined to below 1 percent over 1990–2016 (figure 2). Bangladesh and Viet Nam's also dropped sharply, reflecting increasingly successful demographic transitions going hand-in-hand with rapid economic growth and rising employment, particularly for women. Women's empowerment is known to start a positive cycle of economic development leading to more rational choices in family planning and child rearing.

**FIGURE 1****Population growth in African focus countries***Population growth (annual %)*

Source: Based on World Bank jobs data.

**FIGURE 2****Population growth in comparator countries***Population growth (annual %)*

Source: Based on World Bank jobs data.

## Education and skills mismatches

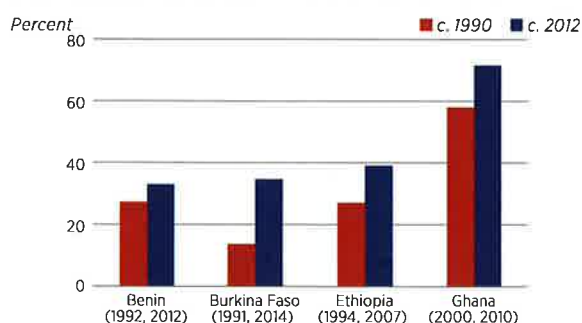
Thus, the supply of labor can hardly be considered a constraint on employment creation in Sub-Saharan Africa. Rather, skill mismatches between potential employees and firms due to lack or poor quality of education and training contribute to low levels of formal employment. Educational attainment is improving in low-income Africa but remains below that in comparator countries, as revealed by literacy statistics (figures 3–6). The low-income African countries generally had considerably lower literacy rates than the comparator countries for both men and women in 1990. In both groups of countries, substantial increases occurred over the next 26 years, except in Senegal. By 2016, male literacy rates in China, Mauritius,

and Viet Nam approached 100 percent, with female rates only slightly lower. Bangladesh experienced particularly rapid growth in literacy rates, especially for women. In the five low-income African focus countries, literacy rates also rose but remained well below those in the comparators, with the partial exception of Ghana, which has literacy rates similar to those of Bangladesh. (However, in Bangladesh, the difference between men's and women's rates is less than in Ghana, because women's rates rose especially quickly in Bangladesh.) Thus, education system weaknesses undoubtedly contribute to holding back remunerative employment in Africa.

If education were a critical constraint on employment, people with higher educational attainment

**FIGURE 3**

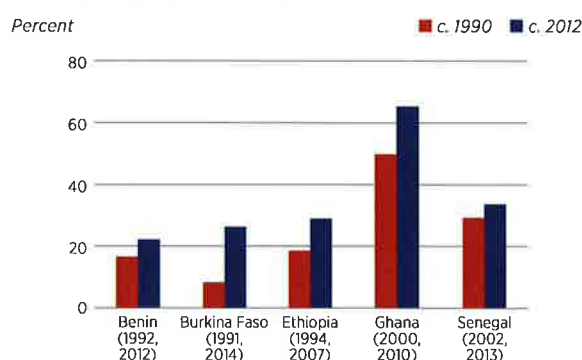
### Male literacy rates in African focus countries



Source: Based on World Bank jobs database.  
Note: Includes men ages 15 and up.

**FIGURE 5**

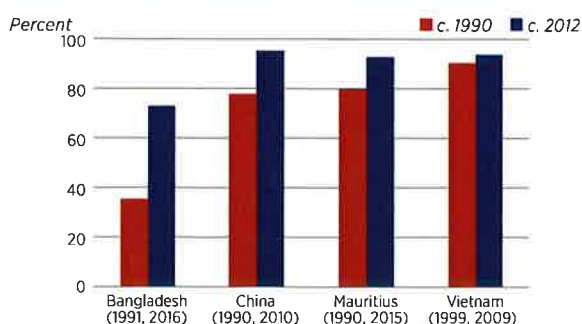
### Female literacy rates in five African focus countries



Source: Based on World Bank jobs database.  
Note: Includes women ages 15 and up.

**FIGURE 4**

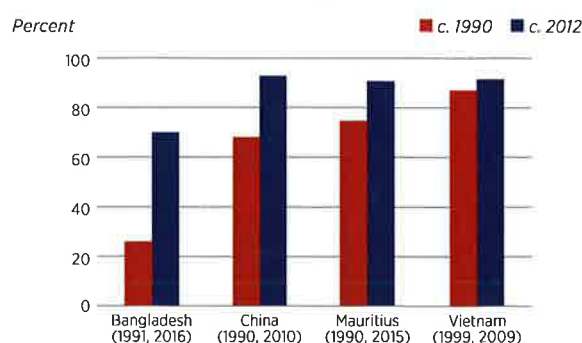
### Male literacy rates in comparator countries



Source: Based on World Bank jobs database.  
Note: Includes men ages 15 and up.


**FIGURE 6**

### Female literacy rates in comparator countries



Source: Based on World Bank jobs database.  
Note: Includes women ages 15 and up.





would be expected to have higher rates of employment. This, however, is not the case (table 8). For the five African focus countries, unemployment and non-labor force participation generally do *not* fall with educational attainment. In all five, the combined nonemployment rate is considerably higher for those with intermediate education than for the population as a whole. Except for Ghana, those with higher education have a nonemployment rate lower than those with intermediate education but higher and often considerably higher than the population as a whole. The higher nonemployment rates for the more educated reflect both higher open unemployment and higher non-labor force participation rates. For example, in Benin, the nonemployment rate for those with higher and intermediate education exceeds 50 percent, above the rate of 31 percent for the general population.

The situation is similar for Bangladesh, with very high nonemployment in general, even higher for those with intermediate and higher education (table 9). Viet Nam, on the other hand, has a very high participation rate for those with higher education. Thus, higher educational attainment by itself is important but not sufficient for landing a good job. Similarly, in North Africa, the African Development Bank reports that only 30 percent of young people with some tertiary education hold wage employment, while another 30 percent are in vulnerable employment, and the remaining 40 percent are unemployed, inactive, or discouraged. In North Africa, open unemployment also rises with educational attainment.<sup>10</sup>

Most enterprise surveys identify the lack of several key competencies in the workforce as a major constraint, despite rising educational attainments. This reflects the fact that the curricula in African schools are not well adapted to the labor market, although enrollments in secondary and higher education have risen impressively. And vocational training has lagged and is often poorly designed.<sup>11</sup>

One study found that the Senegalese tuna fishing industry hired expatriate technicians with salaries up to 15 times higher than their local

counterparts, who lacked the requisite skills.<sup>12</sup> Recent surveys corroborate these findings. Africa lacks formal training programs for craft tradesmen such as plumbers, carpenters, mechanics, and electricians. Instead, workers learn skills through ad hoc training schemes such as apprenticeships, or in informal schools run by religious groups or charities.

## Policy recommendations

Both general and vocational education must be targeted more at providing skills that enhance employment prospects. The education system remains oriented toward preparing students to be civil servants and fails to foster entrepreneurship. Yet, self-employment, almost all of it informal, constitutes more than 60 percent of employment in Africa. These informal entrepreneurs are industrious, willing to take risks, resilient in the face of the adverse business climate, and adept at providing goods and services that low-income people can afford. Much training takes the form of apprenticeships in the informal sector, often offered through Koranic schools or facilitated by kinship groups for their members.<sup>13</sup> Nevertheless, without formal training in finance, management, and accounting, these businesses have limited potential to grow and expand employment.

## INCREASING LABOR DEMAND IN AFRICA

Increasing labor demand is the overriding priority since higher education by itself is insufficient when firms are not hiring.

### Analytical framework

#### *Lewis's 1954 dualistic labor market model and its extensions*

The Lewis model still provides the essential framework for understanding African dualism as resulting from low demand for labor in the modern sector (see the annex).<sup>14</sup> The model features a large traditional sector with subsistence incomes



and a small modern sector paying much higher wages. The process of economic development involves expansion of the modern (formal) sector, gradually absorbing surplus labor from the subsistence (informal) sector. In 1970, Harris and Todaro elaborated Lewis's dualistic labor market model to include large-scale urban unemployment and underemployment, making migration endogenous.<sup>15</sup> Surplus rural labor migrates to the higher-paid urban (modern) sector as long as the expected urban wage is higher than the rural wage. Migration ends when unemployment rises enough that the probability of a finding a high-paying job falls enough to equalize expected urban and rural wages. In 1975 and again in 1990, Fields extended the Harris-Todaro model by distinguishing unemployment and informal employment, so that the labor force includes four groups: workers in the urban modern sector, workers in the urban informal sector, the urban unemployed, and farmers in subsistence agriculture.<sup>16</sup> In Fields's model, taking a low-paying urban informal job makes it easier than remaining in the countryside to search for a modern-sector job.

Fields's framework implies that urban informal earnings are below rural incomes.<sup>17</sup> In reality, informal earnings are higher in urban areas than in agriculture, although urban informal earnings they could be lower, considering the higher pecuniary and non-pecuniary costs of urban living relative to village life.<sup>18</sup>

The Harris-Todaro and Fields' extensions highlight surplus labor manifested in subsistence agriculture, open unemployment, and urban informal employment. But the scarcity of high-paying modern sector jobs, as stressed by Lewis, remains the central problem underlying dualism.

### *The labor market reinterpreted under globalization*

Lewis focused on labor in a closed economy, but historical experience highlights how labor-intensive exports boost income and employment. In successful emerging economies—Botswana and Mauritius in Sub-Saharan Africa; Chile and

Mexico in Latin America; and Bangladesh, China, Malaysia, and Viet Nam in Asia and Southeast Asia—exports played a leading role in long-term growth, sparking a cycle of investment, innovation, and poverty reduction.<sup>19</sup> Most of these transformations began in labor-intensive industries and proceeded to higher-technology production. Other parts of Africa have made some progress in this area, but the continent still has far to go to attain international competitiveness and thus boost investment and job creation. While African exports—notably to China—have boomed, they are concentrated in capital-intensive mining and energy, creating few jobs.

Although the many informal sector workers in Africa have earnings as low as those of apparel workers in Bangladesh, Cambodia, and Viet Nam, little labor-intensive manufacturing has shifted to Africa as wages have risen in China and other East Asian countries. The scarcity reflects Africa's unit labor costs in formal manufacturing due to high formal sector wages.<sup>20</sup> It also reflects overvalued exchange rates, low labor productivity, and continued infrastructure and business climate deficiencies, most importantly in the notoriously expensive and unreliable supply of electric power. Africa could become competitive in light manufacturing, but only if productivity grows and formal sector wages align more closely with informal sector earnings. This would require easing labor market restrictions, ramping up infrastructure investments, and renewing efforts to cut red tape and reduce the harassment of formal sector firms.

Besides industrialization, boosting productivity in agriculture provides a possible path for modernization, shifting labor demand within the rural sector. Many analysts still see manufacturing as crucial for Sub-Saharan Africa,<sup>21</sup> and much attention now focuses on raising the productivity of the urban informal sector.<sup>22</sup> But others instead suggest agriculture, forestry, and tourism as opportunities for growth.<sup>23</sup> Urban informal sector products are predominantly nontradable services and artisanal manufacturing, with minimal exports.



**TABLE 8**  
**Labor force participation, unemployment, and nonemployment in**  
**African focus countries**

Percent

Country and statistic	Non-labor force participation rate	Unemployment rate	Nonemployment rate
<b>Benin, 2011</b>			
Total population	29.1	1.9	31.0
Basic education	27.8	—	—
Intermediate education	58.7	3.5	62.2
Higher education	43.9	9.1	53.0
<b>Burkina Faso, 2014</b>			
Total population	33.3	4.3	37.6
Basic education	50.4	—	—
Intermediate education	61.4	4.3	65.8
Higher education	52.4	7.9	60.3
<b>Ethiopia, 2012</b>			
Total population	16.6	4.3	20.9
Basic education	38.8	—	—
Intermediate education	39.4	14.7	54.1
Higher education	5.7	16.6	22.3
<b>Ghana, 2015</b>			
Total population	23.3	1.7	24.9
Basic education	34.5	—	—
Intermediate education	35.8	9.8	45.6
Higher education	19.7	4.7	24.5
<b>Senegal, 2015</b>			
Total population	43.1	2.8	45.8
Basic education	67.4	—	—
Intermediate education	76.0	2.8	78.8
Higher education	43.3	8.1	51.4

Source: Based on World Bank jobs data.

Note: For working-age population. Nonemployment is non-labor force participation plus unemployment.

— is not available.

Traditional and nontraditional agricultural cash crops, however, offer a viable alternative to manufacturing for labor-intensive export-led growth.<sup>24</sup>

### Seeking global comparative advantage

Although a broad consensus encourages low-income countries to accurately identify a niche of global comparative advantage and create a friendly investment environment to cultivate it, multiple viewpoints compete on how to achieve this goal. The conventional strategy is to focus on economy-wide improvements to the business climate, with both concrete and intangible features such as

maintaining ports, increasing access to stable electricity, curtailing corruption, and improving enforcement of contracts. Lin sorts these into “hard” and “soft” infrastructure improvements to lower transaction costs to business operations.<sup>25</sup> This approach relies on market forces to identify latent comparative advantages and enable businesses to participate in global value chains through foreign direct investment (FDI) and outsourcing, which may contribute to technology transfer and human capital development.

Not all countries, however, have followed that path to emerging market status. Adapting policies to local conditions is important.<sup>26</sup> One alternative uses industrial policy to actively develop specific industries and accelerate structural change. This strategy is based on the premise that market forces alone are inadequate because they burden first movers with excessive costs, disregard public goods aspects of information and innovation, and neglect the coordination problems of developing industries.<sup>27</sup> However, such an interventionist policy faces a key challenge in deciding which industries to prioritize and effectively implementing non-neutral policies.

Policymakers do not have a clear-cut choice. With the era of restrictive trade regimes over, African countries are left without an easily identifiable advantage over more developed nations. Increased mobility of capital and inputs allows FDI to shop around for the most favorable location, which has fragmented manufacturing across the globe.<sup>28</sup> Production now requires cooperation across different time zones, highlighting the increasing role of value chains in manufacturing.<sup>29</sup> Efficient border administration and strong telecommunication networks become crucial. In effect, the business environment itself becomes a source of competitive advantage.

### A comparative analysis of the business environment

Globalization has amplified the importance of the business environment to an economy's growth prospects. With manufacturing becoming



footloose and dynamic, developing nations seeking structural transformation must offer welcoming investment environments. Countries that correctly identify and alleviate bottlenecks for business are more likely to succeed and prosper from globalization.<sup>30</sup> When a government fails to provide public goods or harasses formal sector firms, domestic enterprises shut down or become informal and foreign investors look elsewhere. In Africa, the workforce has paid the price of an obstructive investment climate in the form of fewer employment opportunities and lower incomes.

In the long term, improving institutions and infrastructure is essential.<sup>31</sup> Nevertheless, given the pervasive market failures in African economies, targeted government interventions may also be needed to jump-start economic upgrading and diversification.<sup>32</sup>

#### *World Bank Doing Business rankings*

The 2018 World Bank *Doing Business* report measures key indicators of business regulation, focusing on areas relating to the interaction between government and entrepreneurship, especially those that can be directly influenced by policy.<sup>33</sup> The overall Ease of Doing Business measure ranks countries on their business environment, with the top-ranked country (number 1) having the most favorable business environment. The lower a country's ranking, the more difficult it is for businesses to flourish. This analysis compares the focus countries of Benin, Burkina Faso, Ethiopia, Ghana, and Senegal with the comparator countries of Bangladesh, China, Mauritius, and Viet Nam and with four additional countries to gain perspective, Botswana in Africa, Malaysia in Southeast Asia, and Chile and Mexico in Latin America (table 10).

All five focus countries ranked below the top 100 countries for overall ease of doing business in 2018. Only Burkina Faso and Senegal improved between 2008 and 2018, Burkina Faso by 13 places and Senegal by 22, while Benin stayed at 151. Both Ethiopia and Ghana fell notably in the rankings, Ethiopia from 102 in 2008 to 161 in 2018 and Ghana from 87 in 2008 to 120 in 2018.

**TABLE 9**

#### **Labor force participation, unemployment, and nonemployment in two comparator countries**

Percent

Country and statistic	Non-labor force participation rate	Unemployment rate	Nonemployment rate
<b>Bangladesh, 2016</b>			
Total population	43.6	2.5	46.0
Basic education	65.1	—	—
Intermediate education	71.6	4.6	76.2
Higher education	47.1	8.9	56.0
<b>Vietnam, 2016</b>			
Total population	21.8	1.6	23.4
Basic education	24.9	—	—
Intermediate education	29.6	1.8	31.4
Higher education	12.6	4.4	17.0

Source: Based on World Bank jobs data.

Note: For working-age population. Nonemployment is non-labor force participation plus unemployment.  
— is not available.

**TABLE 10**

#### **World Bank Doing Business overall ranking in African focus countries and comparator countries, 2008 and 2018**

Country, by group	East of Doing Business rank		
	2008	2018	Change
<b>Focus countries</b>			
Benin	151	151	0
Burkina Faso	161	148	13
Ethiopia	102	161	-59
Ghana	87	120	-33
Senegal	162	140	22
<b>Top Sub-Saharan Africa</b>			
Botswana	51	81	-30
Mauritius	27	25	2
<b>Asia</b>			
Bangladesh	107	177	-70
China	83	78	5
Malaysia	24	24	0
Viet Nam	91	68	23
<b>Latin America</b>			
Chile	33	55	-22
Mexico	44	49	-5

Source: Based on World Bank Doing Business 2008, 2018.

Note: 2008 rankings are based on 178 countries; 2018 rankings are based on 190. The lower the ranking number, the better the business environment.

Mauritius maintained a strong position among the top 30 countries in the world in 2008 and 2018, consistently outperforming the Sub-Saharan region. Botswana dropped markedly in the rankings over the same period but remained in the top 100.

The most striking shift is for Bangladesh, which experienced a large deterioration in rank from 107 in 2008 to 177 in 2018. That subpar performance seems at odds with the sustained growth of its garment industry since the late 1970s (box 1).<sup>34</sup> With substantial manufacturing exports and an admirable growth record, Bangladesh would be expected to feature a more favorable business environment. And China, somewhat surprisingly, had an unspectacular business climate but experienced spectacular export-led growth. China ranked only 83 in 2008 and 78 in 2018—still considerably higher than the five African focus countries. The Southeast Asian comparator countries Malaysia and Viet Nam, however, had favorable business climate scores: Malaysia ranked 24 in 2008 and 2018, and Viet Nam made a large improvement from 91 in 2008 to 68 in 2018. The Latin American comparators both fell, Chile from its excellent position of 33 in 2008 to a still quite favorable 55 in 2018, and Mexico from 44 to 49.

#### *Major constraints to business*

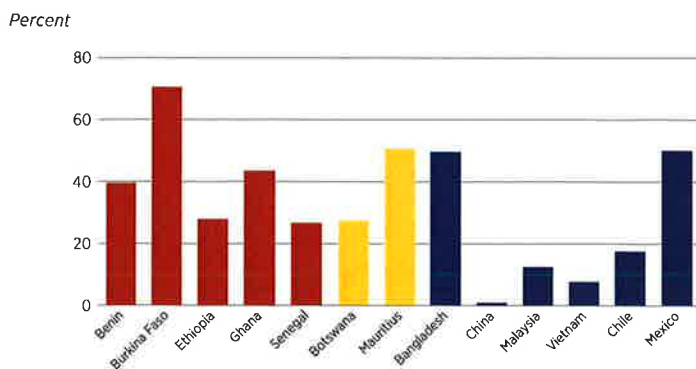
Corruption is often viewed as a major constraint to private sector development (figure 7). In most

of the focus countries and comparator countries, more than a quarter of firms identified corruption as a primary impediment to growth. Only the Asian countries of China, Malaysia, and Viet Nam and Latin America's Chile had lower concerns about corruption. Concern about corruption is relatively low in Ethiopia and Senegal among the African focus countries. Corruption need not preclude economic development, as the case of Bangladesh illustrates, as long as key export industries are insulated from government harassment.

The Doing Business Enforcing Contracts ranking reveals similar ratings across regions (table 11). While Sub-Saharan Africa ranks poorly in general, the comparators, except for China, are not world leaders either—Bangladesh neared last place in both 2008 and 2018.

Electricity is vital to nearly every aspect of a modern economy, and its stable provision is a concrete

**FIGURE 7**  
**Share of firms identifying corruption as a major constraint in African focus countries and comparator countries**



Source: World Bank Enterprise Survey data.

**TABLE 11**  
**Enforcing Contracts overall ranking in African focus countries and comparator countries, 2008 and 2018**

Country, by group	Enforcing contracts rank		
	2008	2018	Change
<b>Focus countries</b>			
Benin	166	170	-4
Burkina Faso	109	163	-54
Ethiopia	77	68	9
Ghana	51	116	-65
Senegal	148	142	6
<b>Top Sub-Saharan Africa</b>			
Botswana	95	133	-38
Mauritius	78	27	51
<b>Asia</b>			
Bangladesh	175	189	-14
China	20	5	15
Malaysia	63	44	19
Viet Nam	40	66	-26
<b>Latin America</b>			
Chile	64	56	8
Mexico	83	41	42

Source: Based on World Bank Doing Business 2008, 2018.  
Note: 2008 rankings are based on 178 countries; 2018 rankings are based on 190.

## BOX 1

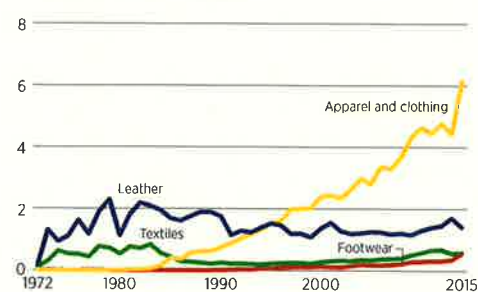
### The garment industry in Bangladesh

In 2017, the apparel and textile industry in Bangladesh, the second largest garment exporter in the world after China, provided 90 percent of the country's exports.<sup>1</sup> Despite terrible infrastructure and prominent corruption when compared with its main competitors, the industry has grown rapidly for three decades and shows little sign of slowing down (see figure).<sup>2</sup> Such success in export manufacturing is surprising for a country with a seemingly uncompetitive business environment. But the expansion has fueled rapid GDP per capita growth, quality of life improvements, and women's empowerment.<sup>3</sup>

The positive social and economic consequences have been enormous. The industry employs about 4 million people, about 90 percent of them women. Bangladesh achieved several 2015 Millennium Development Goals ahead of schedule, including reducing under-five mortality, reducing the prevalence of underweight children, and attaining gender parity in primary and secondary education.<sup>4</sup> As the garment sector expanded and the population began to urbanize, cities were flooded with unskilled labor, mostly rural women seeking employment. Their integration into economic activity led to positive changes in the political sphere and family structure: the country now features the eighth lowest political empowerment gender gap and has reduced gender-based infanticide as society shifts away from viewing women as economic liabilities.<sup>5</sup>

*Bangladesh's exports of garments and other manufactured products, 1972–2014*

Percent of total world exports




Source: MIT Observatory of Economic Complexity database.

How is Bangladesh's impressive performance in garment exports possible with such low scores on business climate indicators? Favorable historical circumstances and very low labor costs have overcome other deficiencies. The development of the textile industry in Bangladesh began in 1978, when Daewoo of South Korea entered a collaborative agreement with Desh Garments of Dhaka to start an apparel factory. While South Korean garments faced trade restrictions in Organisation for Economic Co-operation and Development countries through the Multi-Fibre Agreement (MFA), which set strict import quotas on international textiles, Bangladesh was not subject to such constraints and featured access to cheap labor.<sup>6</sup> As part of their agreement, Desh sent 130 Bangladeshi workers to Daewoo's state-of-the-art facility in South Korea for intensive training in sewing, factory management, and international marketing.<sup>7</sup> After a few years, most of the original trainees started their own garment companies, setting off a rapid transmission of technical know-how across hundreds of factories.<sup>8</sup>

Bangladesh's largely unregulated labor market, with a history tracing back to before the country's independence from Pakistan, also contributed to its export-led growth. The 1947 Industrial Disputes Act restricted Indian and Pakistani firm's abilities to contract workers, severely limiting employment expansion. But during Pakistan's military regime, trade unions from the region that would later become Bangladesh eventually pushed the military to repeal the act, so after independence, Bangladesh inherited a labor environment better suited for manufacturing employment creation.<sup>9</sup> The exceptionally low wages became more important among production costs as rising competition across all levels of the fashion industry cut into already thin profit margins.<sup>10</sup> Despite

(continued)





recent wage hikes in the garment sector, Bangladesh features the lowest minimum wage among its competitors, due in part to rising wages in China and Viet Nam.<sup>11</sup>

Furthermore, the industry is supported by the powerful Bangladesh Garment Manufacturers and Exporters Association (BGMEA), which has been delegated administrative tasks for exports by the government and has obtained major tax breaks, subsidies, and exemptions from labor laws for the garment industry.<sup>12</sup> It stabilizes the industry by protecting it from crippling corruption and notoriously incompetent bureaucratic management. BGMEA and factory owners have a long-term perspective on technology absorption and extensive training programs for workers. In 2013, 85 percent of Bangladeshi workers were offered formal training, surpassing China's 70 percent. Factories have ramped up training opportunities to curb high turnover rates, in some cases investing up to two years in equipping new workers with knowledge, leading to productivity increases across the industry.<sup>13</sup>

In the short term, Bangladesh's garment exports are positioned for further growth. A 2017 fashion industry survey in the United States—Bangladesh's biggest export market—found nearly a third of fashion companies planned on increasing sourcing from the country in the next two years.<sup>14</sup> But many measures of the business climate were more favorable a decade ago, and the sharp recent deterioration could reduce Bangladesh's longer-term prospects. The adverse climate faced by other industries has stifled development in both traded and nontraded sectors, such as pharmaceuticals and drug manufacturing.<sup>15</sup>

The 2012 Tazreen factory fire and 2013 Rana Plaza tragedy placed Bangladesh labor standards under international scrutiny and rightly placed garment manufacturers under intense pressure to improve worker safety.<sup>16</sup> Stories of gross negligence, harsh labor conditions, and child labor practices have been exposed and condemned the world over and are going to gradually force an evolution from a model based on low labor costs.

Bangladesh's potential for export diversification and continued rising living standards will likely require substantial improvements in infrastructure and governance. In the long term, reliable electricity, good roads, and transparent government administration are essential.

### Notes

- |  |  |
|--|--|
| 1. International Trade Center n.d.             | 9. Basu 2018.  |
| 2. Mottaleb and Sonobe 2011; World Bank 2018.  | 10. International Labour Organization 2014b.                     |
| 3. Basu 2018.                                  | 11. International Labour Organization 2017.                      |
| 4. UNDP 2015.                                  | 12. Yardley 2013.  |
| 5. Khatiwada 2014; World Economic Forum 2017a. | 13. International Labour Organization 2017.                      |
| 6. Rhee 1990.                                  | 14. Lu 2017.   |
| 7. Mottaleb and Sonobe 2011.                   | 15. Asian Development Bank 2016.                                 |
| 8. Rhee 1990; Yunus and Yamagata 2012.         | 16. Ahmed, Greenleaf, and Sacks 2014; Burke 2013; Lahirini 2018. |

measure of infrastructure quality. Reliable access to electricity is severely lacking in the focus countries of Benin, Ghana, Ethiopia, and Burkina Faso—demonstrating inferior infrastructure in need of modernization—but not in most of the comparator countries (figure 8). Bangladesh is again an outlier among comparators, featuring the second

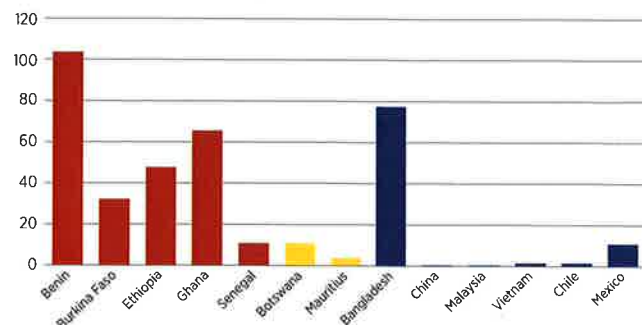
highest rate of outages across focus and comparator countries.

Labor market regulations could be a concern, especially for labor-intensive industries. The prevalence of firms in a country identifying labor regulation as a major constraint vary among focus

**FIGURE 8**

**Reliable access to electricity in African focus countries and comparator countries**

Average hours of power outages per month

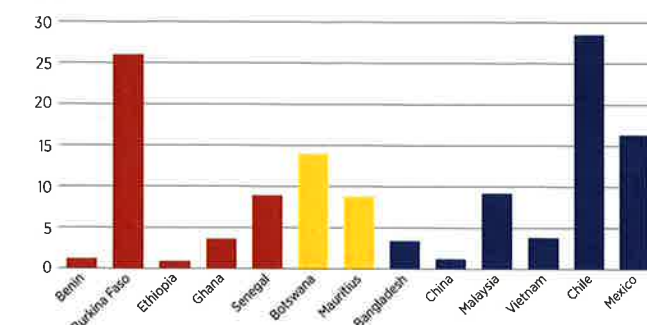


Source: Based on World Bank Enterprise Surveys.

**FIGURE 9**

**Share of firms identifying labor regulation as a major constraint in African focus countries and comparator countries**

Percent



Source: Based on World Bank Enterprise Surveys.

countries and comparators (figure 9). A weighted index of labor market restrictions that covers hiring, minimum wage, working conditions, and dismissal regulations also shows surprising discrepancies (table 12).<sup>35</sup> In Bangladesh and Ethiopia, labor market regulations are not widely viewed as a major constraint, unlike some other dimensions of their business climates.

Although firms in Chile face some of the most lenient labor regulation by index and rank, the share of businesses identifying labor laws as a major constraint is the highest among the countries compared in figure 9. Benin and Ethiopia are in the reverse situation: both feature relatively high labor market regulation index scores, but few firms cite labor regulation as a major constraint.

Minimum wages show the absolute level of labor costs faced by foreign firms. Ultra-low minimum wages in Bangladesh, Benin, Botswana, Burkina Faso, Ghana, and Senegal place them at a clear competitive advantage in labor costs (figure 10).

But when minimum wages in the five focus African countries are scaled by average productivity (proxied by per capita GDP), they are very high compared with the others (figure 11). This result corroborates the findings of a 2018 study by Golub and coauthors that African manufacturing labor

**TABLE 12**

**Indexes and rank of labor market regulation in African focus countries and comparator countries, 2015**

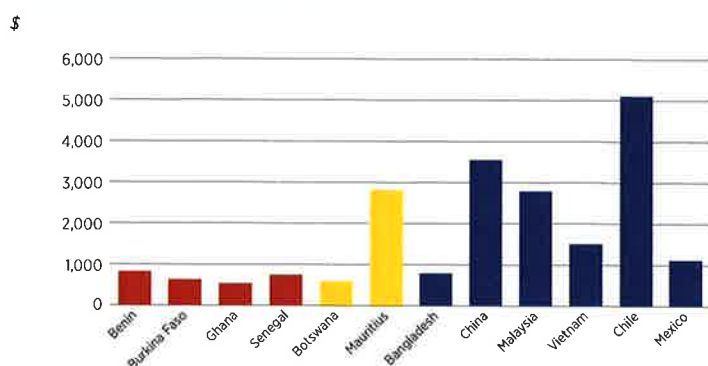
Country, by group	Labor market regulation	
	Index	Rank
<b>Focus countries</b>		
Benin	0.351	121
Burkina Faso	0.280	73
Ethiopia	0.339	114
Ghana	0.246	58
Senegal	0.596	187
<b>Top Sub-Saharan Africa</b>		
Botswana	0.205	41
Mauritius	0.301	92
<b>Asia</b>		
Bangladesh	0.292	38
China	0.266	67
Malaysia	0.176	21
Viet Nam	0.297	88
<b>Latin America</b>		
Chile	0.258	64
Mexico	0.339	116

Source: Golub, Mbaye, and Chwe (2015).

Note: The index is on a 0–1 scale, with 0 being least regulated and 1 most regulated. The ranking is based on 189 countries, with rank 1 the least regulated.

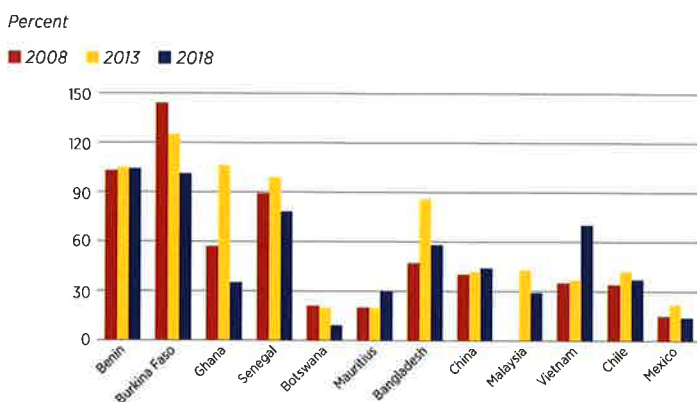
costs are generally high.<sup>36</sup> Ethiopia was an exception, with unit labor costs as low as China's.

African labor costs are falling as a ratio of GDP per capita in the focus countries, while they are

**FIGURE 10****Annualized minimum wage in African focus countries and comparator countries, 2018**

Sources: Based on ILOSTAT data.

Note: Bangladesh data is for garment worker wages, Ethiopia has no private sector minimum wage.

**FIGURE 11****Minimum wage as a share of GDP per capita in African focus countries and comparator countries, 2008–18**

Source: Based on ILOSTAT data.

Note: Bangladesh data are for garment worker wages. Ethiopia has no private sector minimum wage.

increasing in the comparators.<sup>37</sup> Despite this convergence in wages relative to productivity, the Sub-Saharan countries of Benin, Burkina Faso, and Senegal clearly feature exceptionally high minimum wages that push employment opportunities to the informal sector, where minimum wages do not apply.

**International trade**

Countries can facilitate trade by lowering transaction costs for imports and exports. In the *Doing*

*Business* Trading across Borders ranking, the African focus countries lag far behind the comparators, with the notable exception of Bangladesh, whose position deteriorated to near the bottom of the rankings in 2018 (table 13). Botswana and Mauritius stand out with exceptionally low times to clear goods across borders (figure 12).

Overall, the five African focus countries perform worse on most measures of the business environment than the comparator countries. Countries that have successfully globalized have generally developed environments conducive to private sector development, although not necessarily in all respects or in the same ways. Evidence comes from across the globe. China in Asia, Chile in Latin America, Malaysia in Southeast Asia, and Mauritius in Sub-Saharan Africa all industrialized expeditiously and stood out among their neighbors with some combination of investing in

**TABLE 13****Trading across Borders overall ranking in African focus countries and comparator countries, 2008 and 2018**

Country, by group	Trading across Borders rank		
	2008	2018	Change
<b>Focus countries</b>			
Benin	124	136	-12
Burkina Faso	170	113	57
Ethiopia	150	167	-17
Ghana	61	158	-97
Senegal	136	135	1
<b>Top Sub-Saharan Africa</b>			
Botswana	145	50	95
Mauritius	17	70	-53
<b>Asia</b>			
Bangladesh	112	173	-61
China	42	97	-55
Malaysia	21	61	-40
Viet Nam	63	94	-31
<b>Latin America</b>			
Chile	43	68	-25
Mexico	76	63	13

Source: Based on World Bank Doing Business 2008, 2018.

Note: 2008 rankings are based on 178 countries; 2018 rankings are based on 190.



infrastructure, limiting obstacles to starting businesses, enforcing contracts and trade activities, and limiting regulation of labor markets. Friendliness to markets and supportive government policies allowed businesses to build their country's niche industries, which led to a blooming of production and virtuous cycles of investment, innovation, and poverty reduction. As the countries graduate beyond middle-income status and their competitive advantages shift, they must remain open to learning and adjust appropriately.

Bangladesh appears in some respects to be a glaring exception since it rates very poorly on a substantial number of measures of the business climate and governance (see box 1). Recently the business climate has worsened dramatically in Bangladesh, and if it does not improve, long-term export diversification will almost certainly be derailed.

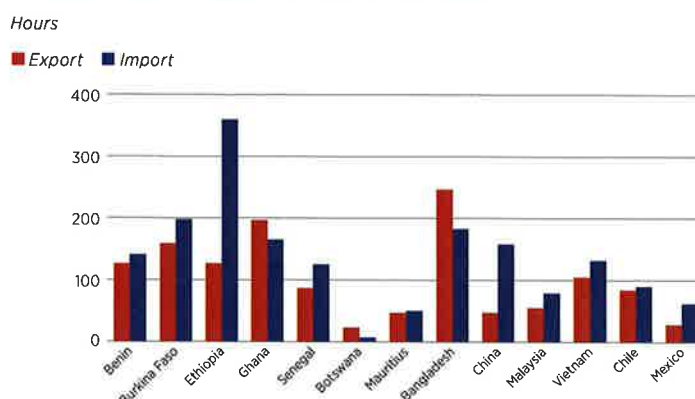
#### *Investment climate policy*

For the five African focus countries, improving governance, investing in infrastructure, and reducing impediments to business are essential. Despite low minimum wages and significant improvements in some areas (such as starting a business), Benin, Burkina Faso, Ghana, and Senegal have not enjoyed export-led growth largely because weak business environments created bottlenecks and barriers to firm entry that kept the country from experiencing sustained growth. The largest obstacles include prohibitive startup costs, terrible access to credit, and poor infrastructure quality—both hard and soft. They prevent foreign and domestic investors from exploring potential latent comparative advantages and ultimately impede private sector growth and employment generation.

Sub-Saharan countries face the challenging task of finding niche industries in an increasingly complex global market. However, the situation is far from hopeless, with Botswana and Mauritius providing examples of success. While there are multiple possible pathways to raising employment through labor-intensive export growth, improving the investment climate appears to be essential.

**FIGURE 12**

**Time to export and import across borders in African focus countries and comparator countries, 2018**



Source: Based on World Bank Doing Business 2018.

#### **Targeted government policies to boost private sector development and exports**

Structural transformation and diversification of production and exports need not await full institutional development, which can take a very long time.<sup>38</sup> Targeted policies to promote domestic business development and foreign investment can jump-start the process. Two such policies are export-processing zones (EPZs), which attempt to improve the business environment for firms in a circumscribed area, and incubator and accelerator programs, which aim to boost domestic small and medium enterprises.

#### *Export processing zones to attract foreign investment*

As the age of import substitution industrialization strategies ended and the era of globalization began, export processing zones (EPZs) quickly became the industrial policy tool of choice for developing countries seeking export-led growth. Today, even conservative estimates by the International Labour Organization estimate that more than 66 million workers are employed in 3,500 EPZs in more than 130 countries worldwide.<sup>39</sup> Maurer and Degain estimate that around one-fifth of developing country exports and almost 13 percent of their imports flow through EPZs.<sup>40</sup> But



## BOX 2

### History of export processing zones

The small Irish town of Shannon is often credited with establishing the world's first modern EPZ.<sup>1</sup> In 1959, in response to an economic crisis, local business leaders proposed creating a small zone near the airport where investors could benefit from lower taxation and less regulation than in other regions of the country. Once approved, the Shannon Free Zone offered lower corporate taxes, research grants for companies, and exemptions on value-added tax (VAT) for imports and goods used for export production.<sup>2</sup> The area experienced considerable growth in light manufacturing of textiles, cut diamonds, and consumer electronics, with factories employing mostly women.<sup>3</sup> The United Nations Industrial Development Organization soon began promoting EPZs by facilitating information exchanges between Shannon and officials from China, Mauritius, and Southeast Asian countries, and their early successes quickly made them a popular industrial policy instrument.<sup>4</sup>

Today, although EPZs vary considerably, they typically operate under the same basic principles as the original Shannon Free Zone. Imports and exports are free of duties and exchange controls, licensing and other regulatory processes are more relaxed, and firms are exempt from VAT, corporate tax, or other local taxes.<sup>5</sup> The zones generally aim to boost and diversify exports, attract foreign direct investment and generate foreign exchange, promote formal employment in a setting of high unemployment or underemployment, and serve as experimental regions and catalysts for wider economic development.<sup>6</sup> EPZ achievement of these goals across the world is mixed. In some instances, EPZs have been effective at attracting FDI and generating employment, especially in East Asia and Latin America. The Chinese program in particular is hailed as a great success.<sup>7</sup> But in Sub-Saharan Africa, EPZ programs have been disappointing, with only a few exceptions.

#### Notes

- |                              |                 |
|------------------------------|-----------------|
| 1. Zeng 2015.                | 5. Farole 2011. |
| 2. Kennard and Provost 2016. | 6. Farole 2010. |
| 3. Neveling 2015.            | 7. Farole 2011. |
| 4. Arthur 2017.              |                 |

despite the rapid expansion of EPZs, their record of success is mixed and their effectiveness remains controversial.

EPZs aim to overcome investment constraints in a specific region of a country by providing investors with lower taxation, reliable utilities, privileged customs treatment, and so on. Improving the business climate in a circumscribed area would appear more feasible than doing so across the board.

But many Sub-Saharan countries have struggled to insulate firms in EPZs from inherently poor business environments. In some cases, although EPZs provide more reliable electricity and better roads than non-EPZ areas, the improvements are

insufficient to boost competitiveness.<sup>41</sup> In Ghana, Lesotho, and Tanzania, EPZs perform worse than non-EPZs in critical ways, especially in export and import waiting times despite being located near major trade gateways. These problems show the difficulties of improving the business climate even within specially demarcated areas when institutions are weak.

*China.* China's experience with EPZs is a success story on all accounts and a prime example of using EPZs as a testing ground for innovative policies. China initially established four zones on its coasts (Shantou, Shenzhen, and Zhuhai in Guangdong Province, near Hong Kong, and Xiamen in Fujian Province, near Taiwan). Implementation varied,



ranging from free commercial zones to industrial and technology parks.<sup>42</sup> Preferential policies included inexpensive land, rapid customs clearance, and unfettered repatriation of profits. In addition, the Chinese government experimented with granting local governments greater political and economic autonomy, including discretion over local tax structures and labor regulations.<sup>43</sup> Strong infrastructure and abundant labor, along with pragmatic governance, eventually attracted major FDI inflows, sparking a structural transformation unlike any the world had ever witnessed. Shenzhen, in particular, grew from a small fishing village to an industrialized metropolis within a generation.<sup>44</sup>

*Mauritius.* Mauritius' EPZ is widely regarded as the most successful in Sub-Saharan Africa. After Mauritius gained full autonomy from the United Kingdom in 1968, its pro-business government sought to develop industry to diversify its monoculture sugarcane economy. An import substitution industrialization strategy failed to raise employment and drained government revenue when protected and subsidized domestic firms did not become competitive. The government then sent teams to study the export-oriented strategies of Hong Kong, Singapore, Taiwan, and other economies. The Mauritius Export Processing Zones Act was passed in 1971, offering tax holidays, the option to repatriate profits, and duty exemption on imports of machinery, equipment, and raw materials to "bonded factories," allowing them to locate wherever their needs were best met.<sup>45</sup> The program was a success from the start: by 1973, over 14,000 jobs and 34 new factories operated in the EPZ, mostly in apparel and textiles (see box 3 comparing EPZs in Mauritius and Senegal).<sup>46</sup> In 1985, Mauritian EPZs overtook sugar as the primary source of exports and employment in the country, accomplishing the main goals of diversification and employment creation.<sup>47</sup>

*Ethiopia.* In late 2002, the government of Ethiopia devised a comprehensive industrial policy focused on developing agriculture and industry. Among policy instruments was the establishment of industrial zones to attract FDI, focusing

on the garment and footwear sectors.<sup>48</sup> The innovative program included both government- and foreign-led industrial parks operating in an EPZ-like environment, with China crucial in their financing and development. Ethiopia's program is considered to have had mixed success. It achieved rapid growth in manufacturing exports, but they remain very low in absolute terms, and recent macroeconomic pressures threaten the viability of the model and future growth prospects (box 4).

*Ghana.* Ghana officially instituted an EPZ program in 1994 as a response to sluggish growth. Uniquely, its program introduced "single unit" free zones, a type of licensing that allowed firms to operate anywhere in Ghanaian territory but receive all the benefits typical of an EPZ. The industrial sector initially responded positively but saw only a marginal increase in growth.<sup>49</sup> During the 2000s, Ghana experienced large-scale investment and export growth in its free zones program, with most FDI flowing through single unit zones. Although EPZs represent a large share of total FDI in the country, the overall level of investment remains low. Total employment generation is minimal, with EPZs accounting for less than 4 percent of industrial sector employment.<sup>50</sup>

*Senegal.* Senegal offers an example of a less-than-successful EPZ program (see box 3). The Dakar EPZ was established in 1974 and became operational in 1976, but it failed to create much employment or substantially increase FDI or foreign exchange.<sup>51</sup> The zone, much like its competitors, offered exemptions from customs duties, corporate income taxes, and taxes on machinery, along with unrestricted repatriation of capital and profits. Employment in the Dakar EPZ reached a high of 1,200 in 1986 only to fall back to 600 in 1990.<sup>52</sup> The Dakar EPZ experiment ended in 1999, when it hosted only 14 active enterprises with 940 employees.<sup>53</sup> Its failure to spark employment growth reflected failure to insulate firms from labor market rigidities, high utility and transportation costs, and cumbersome bureaucratic procedures. These problems were estimated to add 25 percent to final export costs.<sup>54</sup>





### BOX 3

#### Mauritius and Senegal: Success and failure with export processing zones

Mauritius and Senegal's EPZ programs were in some ways similar. Both were among the earliest—only three years apart in the 1970s—and they offered similar tax incentives. The countries also have social, political, and geographical similarities. Both are very small but have favorable coastal locations for reaching developed country markets, and they have longstanding cultural and economic ties to other regions of the world. Both benefited from trade preferences in developed countries and were unconstrained by the 1974 Multi Fibre Agreement restricting textile exports. Both are among the few countries that had maintained democratic elections and ethnic harmony ever since their independence in the 1960s.

Yet the EPZ program outcomes could not have been more different. Mauritius experienced major FDI inflows, diversification of industry, and employment generation. Senegal failed by every measure.

Analyses of Mauritius' success in export diversification identified several crucial economic and political characteristics<sup>1</sup>:

- Tax revenue from sugar exports was used to finance EPZ development and increase social spending, particularly on education, raising domestic labor productivity and easing social tensions.
- The foreign exchange value of the Mauritian rupee remained competitive.
- Infrastructure was relatively well developed.
- Domestic wage rates were kept low to promote labor-intensive industry, partially by exempting EPZs from labor legislation.

Analyses agree less on the role import barriers played. Most important, as Bheenick and Shapiro put it, "Above all, the government must be persistent, flexible, responsive, and realistic. An unwieldy and unprofessional bureaucracy, disdainful of market incentives and concerned only with limited political considerations, would almost certainly have led to failure."<sup>2</sup>

In Senegal, in contrast, economic and social policies have been much less favorable. Senegal suffered from prolonged currency overvaluation following independence, which eventually ended in 1994 with a massive 50 percent devaluation.<sup>3</sup> Infrastructure investment and education lagged. Major policy differences from Mauritius hindered the development of domestic industry. Whereas in Mauritius, domestic firms invested heavily in the EPZ—at first in joint ventures with foreign firms<sup>4</sup>—in Senegal, domestic exporting firms were explicitly prohibited from entering the EPZ and faced higher taxation that increased the anti-export bias of import protection measures.<sup>5</sup> More generally, firms in Senegal complained, they received the promised incentives late, if at all, and they were not in practice exempt from highly restrictive labor laws.

At bottom, Mauritius's institutional environment and political commitment were much better than Senegal's. While Mauritius was far from perfect, it featured a better business environment overall, leading to the country's description as "one big EPZ."<sup>6</sup> On the other hand, Senegal's poor infrastructure, failure to deliver incentives promptly, and inability to insulate firms from onerous labor-market regulations and union agitation undermined both the zone and single-firm free trade points.<sup>7</sup> The Mauritian government did what it took to make the EPZ a success. Senegal was largely stymied by powerful interest groups engaged in rent-seeking.

#### Notes

1. Bheenick and Shapiro 1991; Frankel 2012; Mosley 2018.
2. Bheenick and Shapiro 1991, 267.
3. Cisse, Choi, and Maurel 2017.
4. Baissac 2011.

5. Cisse, Choi, and Maurel 2017; Farole 2011.
6. Madani 1999.
7. Farole 2010.



Like Ghana, Senegal later implemented single unit EPZ licensing. In 2008, an estimated 350 firms operated on a licensing basis, compared with 50 firms in region-based EPZs.<sup>55</sup> Nevertheless, Senegal has yet to experience sustained growth of export-oriented manufacturing.

*Characteristics of success.* Numerous factors contributed to China's impressive EPZs track record—first and foremost, the government's commitment and flexibility. China forged its own path from a centrally planned economy to a market orientation, with pragmatic leadership that created a supportive business climate. For example, as part of the government's decentralization, local governments were entrusted with responsibility for roads, gas, water, sewage, telephone, electricity, and port infrastructure, funded primarily through government investment but also through public-private partnerships when faced with capital constraints. Furthermore, the local governments competed vigorously to attract private investment and typically provided services such as legal, accounting, and management consulting depending on the needs of local companies.<sup>56</sup> Zones offered differing packages of programs and incentives.<sup>57</sup>

More generally, successful EPZs tend to feature, at least initially, host country government support, good infrastructure, streamlined bureaucracy, private development and operation, and open trade policy. Failed EPZs commonly suffer from subpar location, excessive bureaucracy hampering the delivery of incentives and public services, rigid labor regulations without practical exemptions for the EPZ, poor coordination between government regulators and private investors, and excessive reliance on tax holidays as a primary incentive.<sup>58</sup> High subsidies can lead to fiscal difficulties, support for inefficient firms, and rent-seeking behavior so that the costs of the EPZ outweigh the benefits.

*Challenges for African EPZs.* The unprecedented era of rapid globalization in which China and Mauritius's EPZ programs were implemented contributed to their success. Developing countries today face a more competitive environment.<sup>59</sup> In the earlier

time, trade regimes were more closed than today, so duty and tariff exemptions provided a straightforward competitive advantage. And EPZs were not so common, so they faced fewer competitors (but Senegal shows that being among the first was no guarantee of success). Except for Mauritius, Senegal, and, in 1974, Lesotho, African countries are latecomers, and few EPZs experience rapid growth in their first 5–10 years of operation.<sup>60</sup> Since most Sub-Saharan EPZs became fully operational in the mid-2000s, it is perhaps too early to classify the rest of these programs as successes or failures.

The structure of employment in EPZs has varied widely across countries but is often a source of controversy among civil society groups. The International Labour Organization stresses that working conditions and worker rights in EPZs often fail to meet world standards, especially regarding freedom of association and collective bargaining.<sup>61</sup> In Madagascar, for example, the Free Zone has disproportionately drawn women from the low-wage informal sector to relatively well-paying export processing industries with jobs like others in the formal sector, but the zone's excessive work hours and high turnover may limit long-term opportunities for women.<sup>62</sup>

In any case, the literature considers EPZs today to be a second-best intervention since they do not directly address the problems constraining manufacturing growth. Instead, they introduce distortions to the existing environment to attract investment, typically in sectors with no inherent competitive advantage.<sup>63</sup> More traditional, first-order recommendations prefer overall open trade, improved infrastructure, and high-quality institutions to the EPZ approach.<sup>64</sup>

Even in the most successful Sub-Saharan EPZ programs, cost-benefit analyses have not clearly shown major welfare improvements. The Mauritian EPZ, despite reducing unemployment and raising foreign exchange, remains a topic of debate. A cost-benefit analysis by Sawkut, Vinesh, and Sooraj finds an overall negative effect on the country's economy, arising primarily from the



## BOX 4

### Ethiopia's adaptation of China's model

China has become increasingly influential development in Sub-Saharan Africa. China's structural transformation has made its economy complementary with economies in the region, because its status as a resource-scarce country with an aging population, rising wages, high savings, and infrastructure overcapacity matches well with the abundant mineral resources and underemployed labor that Sub-Saharan Africa can provide.<sup>1</sup> As China begins to delocalize labor-intensive activity and export its unique economic zone model, Ethiopia has been especially open to adapting it, showcasing the potential benefits and challenges for African countries that work with the Asian country.

Since the early 2000s, Ethiopia has followed a two-pronged approach to boost FDI and promote industrialization by employing both government- and foreign-led industrial parks. It has emphasized the garment, textile, and leather product industries, which are very labor-intensive and can support backward linkages to the agricultural sector. Ethiopia's history of cotton growing, spinning, weaving, and knitting, along with largely untapped livestock resources, makes local sourcing possible.<sup>2</sup>


The government-led economic zones, such as the Bole Lemi I Industrial Zone, provide serviced industrial land, prebuilt factory facilities, and improved infrastructure, including water supply, sanitation, and electrical substations. The privately run areas, such as the Eastern Industrial Zone (EIZ), are entirely run by foreign investors: businesses are offered land on a concessional basis and given responsibility for developing infrastructure within the zone, with the Ethiopian government covering 30 percent of the cost.<sup>3</sup> The EIZ is owned and managed by the Jiangsu Qiyuan Group, with major financial support from China in grants and long-term loans sourced from its economic cooperation zones program.

By some measures, this innovative approach to industrial policy has succeeded. Between 2002 and 2014, Ethiopia's manufacturing employment increased from fewer than 40,000 workers to more than 200,000; of that, employment in foreign-owned manufacturing grew from fewer than 3,000 to more than 50,000.<sup>4</sup> In the same period, apparel and textile exports grew from less than \$20 million to nearly \$120 million.<sup>5</sup> However, Ethiopia's export growth is still largely dominated by minerals and agricultural products, especially cut flowers.<sup>6</sup> Skill transfer and backward and forward linkages to the local economy remain weak due to logistical issues and the inferior quality of local inputs. And China, facing rising Ethiopian public debt and foreign exchange shortages, is starting to show signs of reducing investment in Ethiopia.<sup>7</sup>

#### Notes

1. Francoise 2017.
2. Francoise 2017.
3. IPRCC and UNDP 2015.
4. Ansu, McMillan, Page, and te Velde 2016.
5. Staritz and Lindsay 2017.
6. Francoise 2017.
7. Aglionby and Feng 2018.





excessive costs of the incentives for producers in the EPZ, which were higher than the returns.<sup>65</sup> Cost-benefit analyses in other countries have typically found only marginally positive welfare effects.<sup>66</sup> Planning for EPZs should carefully weigh the benefits to be offered to investors (see box 3).

*Policy recommendations for successful export processing zones.* Despite the unclear evidence of their effectiveness, EPZs remain popular worldwide. In Africa, more than 10 countries have recently declared plans to expand EPZs and similar programs, and many others may have similar plans.<sup>67</sup>

In planning these zones, policymakers should consider several important issues. First, the traditional EPZ model is unlikely to succeed in today's environment. Ultra-low tax rates and cheap surplus labor may be insufficient to create a globally competitive zone for labor-intensive manufactures such as clothing and shoes, especially since these programs continue to grow in popularity. Thus, countries must seek other niches of competitiveness. The investment climate—particularly infrastructure and trade facilitation both inside and outside the EPZ—shapes success and should be a primary focus. If a country cannot capture positive spillovers from the EPZ into the larger economy, the program risks becoming an unsustainable enclave of foreign exchange instead of a catalyst for structural transformation. Furthermore, countries that adopt a licensing or “single-firm” arrangement must address the overall business climate as a possible obstacle to investment.


Second, countries must consider potentially unsustainable costs, both financial and social, of an EPZ program. Ethiopia, for example, should see that activities in private industry-led zones align with its own interests, instead of foreigners'. More generally, countries must avoid a race to the bottom strategy featuring lavish incentives and tolerance of human rights abuses. Rather than rely on distortionary and costly subsidies, governments should ensure that costs of doing business are low and predictable through simplified procedures and efficient public services.

Third, EPZs should be considered only as part of a larger development framework. Although EPZs have an impressive potential for kick-starting growth, they are a way to experiment but typically not a way to directly generate substantial wealth. In China and Mauritius, the most successful cases, EPZs were certainly valuable for generating employment, but even more so for sparking the eventual expansion and diversification of domestic industry. To achieve this requires competent governance to identify what works in the zone and subsequently transfer those characteristics to the rest of the country or else integrate the domestic market into the region. Improving the overall business environment complements special measures in the EPZs, and a hostile environment may expose the EPZs to general risks and prevent EPZ investment from spilling over into the wider economy. Ethiopia and other countries with innovative programs show exciting potential in pursuing an improved business environment.

#### *Incubator and accelerator programs to assist small and medium-size enterprises*

Incubator and accelerator programs, which aim to boost small and medium-size businesses, are another form of targeted government policy to promote business development and foreign investment. New entrepreneurs start with few factors under their control. Historically, new firms relied on traditional sources of funding, such as bootstrapping. By minimizing personal expenses, selling personal assets, using low-cost or free techniques, and turning fixed costs into variable costs, entrepreneurs would start ventures with modest capital and little debt and build them slowly.<sup>68</sup> Developing a clientele usually takes a long time. During the initial period in which most businesses make little or no income, the unavoidable costs of rent, labor, capital, and marketing can lead to serious cash-flow problems in the absence of an adequate financial plan.

*Business incubators.* A business incubator can help newly created enterprises address some of the challenges by providing them professional advice, management tools, and pooled physical facilities.



Incubator services generally include improved access to finance and workspaces at low rents with low-cost access to telephone, internet, and electricity service. The incubator can provide the facilities and services at reduced costs because donors, or governments provide subsidies, an incubator encompassing many firms provides economies of scale, and the incubator's credibility increases bank confidence and thus firms' access to financing. Incubators also provide mentorship (learning from seasoned entrepreneurs), networking opportunities with other entrepreneurs within the same incubator, and technical support and professional services (bookkeeping, tax returns, market research, and so on).

Business incubators can influence the long-term economy because they enhance entrepreneurial culture, support new businesses with high growth potential, help new businesses establish closer ties with other entrepreneurs in the same sectors, transmit knowledge from partner research centers and universities, and thus considerably increase the rate of survival and success of small and medium-size enterprises. The longevity of businesses that graduate from these programs is a commonly used measure of success. In Canada, where over 150 incubators flourish, 87 percent of incubated businesses make it to their fifth year, compared with just 51 percent of non-incubated businesses.<sup>69</sup>

During the 1990s, the business incubator model changed. Incubators shifted their focus from providing physical and financial resources toward offering a broader range of more intangible high value-added services.

*Business accelerators.* The rise of accelerator programs also provides a new focus.<sup>70</sup> Like incubators, accelerators support and develop new businesses. Whereas incubators are usually nonprofit entities such as universities and national or local government agencies, accelerators are for-profit venture capital organizations that provide financing, expertise, and technical and logistical support in return for a stake in the business. Whereas

incubators typically feature an open-ended timeline and are concerned with the longevity of businesses, accelerators operate on a limited timeline with a focus on growing companies quickly and sustainably.<sup>71</sup> Accelerators can be understood as holistic business advisory services, often bearing strong resemblance to traditional management consulting practices but adjusted to fit small and medium-size organizations.<sup>72</sup>

### **Policy recommendations for business incubators**

In Africa, incubators and accelerators have both risen in popularity. Increased smartphone adoption, lower overall internet costs, and the large African market have drawn significant investment from high-profile investors and tech giants such as Facebook and Google, leading to the rapid development of what are locally known as “tech hubs” across Africa. As of early March 2018, 442 active incubators, accelerators, and co-working spaces were recorded on the continent, a 40 percent increase over the past two years.<sup>73</sup>

Although incubators, accelerators, and tech hubs are relatively new to Africa, experiences elsewhere provide policy lessons. For example, some nascent firms in incubators may be incompatible with their business environment, so they can survive only inside the incubator but not outside it.<sup>74</sup> Recent developments suggest that organic, multistakeholder ecosystems work better than initiatives led by government, academia, or the private sector alone.<sup>75</sup> In general, large government assistance programs for small and medium-size enterprises have proven unsuccessful since massive template approaches miss heterogeneous business needs. Entrepreneurs are better assisted either by other entrepreneurs or by established industry experts.<sup>76</sup> The sheer number of tech hubs in Africa presents a considerable opportunity for improving the entrepreneurial environment, but the absence of links to academic centers of innovation is seen as inhibiting the cross-pollination of ideas and skills.<sup>77</sup>



## COUNTRY CASE ANALYSES: THE FIVE AFRICAN FOCUS COUNTRIES

### Senegal

Senegal is one of the most stable democracies in Africa, with fair elections, ethnic harmony, and religious tolerance. It is well situated on the West African coast to access European and North American markets. Its limited resource endowment has shielded it from the “resource curse” of economic distortion, corruption, and violence associated with mineral rents. Although rainfall is erratic, irrigation potential is considerable. Yet, economic performance since independence in 1960 has been disappointing. Social indicators such as life expectancy and literacy have improved, but real GDP per capita is barely above the level of 50 years ago, poverty remains pervasive, and underemployment in the informal sector is the norm. At the World Bank threshold of \$3.10 a day, two-thirds of the population were poor in 2011—nearly unchanged from 2005, though somewhat better than in the early 1990s, when the poverty rate was above 80 percent.

#### *Employment structure*

Senegal’s weak economic growth, combined with unabated population expansion, has created a growing gap between labor supply and demand. Employment prospects are bleak, especially for women and young people.<sup>78</sup> The population increased by more than 50 percent over the past 15 years to 15.5 million in 2016, and formal employment opportunities have not kept pace. The growing working-age population has been almost entirely absorbed into the informal sector, either in agriculture or, especially, in urban informal work. As a result, living standards and economic prospects for young people are dismal. As a 2017 Millennium Challenge Corporation report points out, for much of the population, the situation has barely improved over the past 20 years.<sup>79</sup>

Employment as a share of the working-age population in 2015 was 59 percent for men and only 32.8 percent for women.<sup>80</sup> Employment is

overwhelmingly informal in Senegal as in other low-income African countries. Fewer than 10 percent of the labor force are employed in the formal sector, more than 75 percent work in the informal sector, and the remaining 15 percent are unemployed (in the labor force and actively looking for work). In a working-age population of more than 8 million and a labor force of about 6 million, only 500,000 are formal sector employees receiving regular pay and benefits in the public and private sectors. Along the same lines, the National Agency of Statistics and Development reports that over 95 percent of employers and independent workers are informal.<sup>81</sup>

#### *Labor market constraints*

Over the past 30 years, employment creation in the formal private sector has stagnated, while the public sector has shed jobs. Most recently, improved economic growth in Senegal, led by non-tradable sectors such as commerce, construction, communications, and information technology, has moderately boosted formal employment. But about two-thirds of those jobs are temporary.<sup>82</sup>

For women and young people, the labor market is especially difficult. In 2011, 46 percent of young people (ages 15–35) still lacked formal education, though education levels have been rising. Some 40 percent of young people classified as outside the labor market are “discouraged workers”—those who have ceased looking for work due to poor prospects. Those with jobs are overwhelmingly in the informal sector.<sup>83</sup>

Although Senegal’s constitution guarantees gender equality, women and girls are disproportionately affected by poverty. Especially in rural areas, women experience discrimination in education, inheritance, and family gender roles. Women suffer from domestic violence, genital mutilation, and limited reproductive rights, including restrictive abortion regulations.<sup>84</sup> Women face unfair inheritance laws, have little access to formal employment, face obstacles in completing their education, and possess little authority in decisions on marriage or land acquisition.<sup>85</sup> More active female



economic participation will increase women's financial independence and political power, changes that will reduce the gender gap.

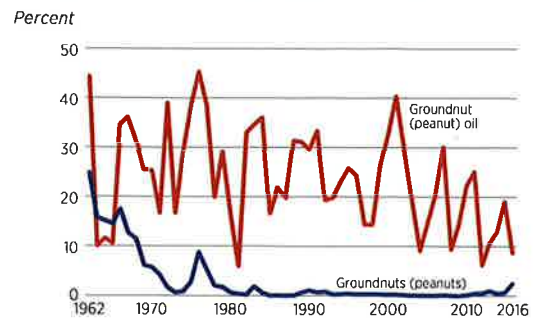
Although the informal sector provides livelihoods of last resort to millions of people, it is characterized by low incomes, lack of benefits, and no security. Informal sector earnings average about one-fourth public sector earnings and one-third formal private sector earnings.<sup>86</sup> The unsatisfactory informal sector employment conditions and continuing gender inequalities highlight the critical importance of creating formal job opportunities.

#### *Potential labor-intensive exports*

**Groundnuts.** Groundnuts (peanuts) have historically been Senegal's most important cash crop, with the vast majority processed and exported as groundnut oil. Senegal remains one of the world's largest exporters of groundnut oil (figure 13), but its exports have dropped considerably due to a decline in world demand for groundnut oil and Senegal's declining productivity and competitiveness. Edible groundnuts are now a much more promising export than groundnut oil. High quality edible groundnuts can command much higher prices and therefore provide higher farmer incomes than groundnut oil. Until the 1970s, Senegal was a major exporter of green groundnuts. In late 1960s, scientists discovered that improperly stored groundnuts may develop mold that contains aflatoxin, a poisonous substance known to cause cancer. Senegal, like many other developing countries, did not have the technology and storage infrastructure to preserve the groundnuts, which led to their contamination with aflatoxin. Partly as a consequence, Senegalese raw groundnut exports declined sharply in the 1970s. The industry began to gradually recover in 2010 with exports of groundnuts to China, but exports of green groundnuts are still very limited. With modern storage technologies and increased credit, edible groundnuts would have the potential to provide much-needed employment and accelerate economic growth, but these improvements have not materialized.<sup>87</sup>

**FIGURE 13**

**Senegal's world market share of exports of green groundnuts and groundnut oil, 1962–2016**



Source: MIT Observatory of Economic Complexity database.

The groundnut value chain, though critical for economic growth and poverty alleviation in Senegal, has proved difficult to organize. Like other cash crop systems engaging smallholder farmers, the groundnut value chain faces a fundamental tradeoff between coordination and competition in pricing, provision of credit and inputs, collection of the crop, payment to farmers, and research and extension, as Poulton and coauthors described for the cotton industry.<sup>88</sup> For input provision and quality control, smallholder farming requires organization and assistance by either the state or large private firms, which is difficult to reconcile with decentralized competition. Infrastructure, such as storage facilities and transport systems, is also critical. Opportunistic behavior by either farmers or input providers can threaten such an integrated system. It was hoped that privatization would improve the situation. In principle, a large multinational firm with groundnut cultivation and distribution expertise could institute an input distribution system and build some infrastructure, while government could invest in other infrastructure and regulate firms that had a substantial market share. But in Senegal, disorganization and opportunistic behavior have continued due to difficulties of enforcing and monitoring contracts, and the groundnut industry remains in crisis.

**Fishing.** Fishery products emerged as one of Senegal's main exports in the early 1970s, but fish

stocks are threatened by overfishing and inefficient processing. Notably, tuna canning factories have been unable to compete with Asian producers. Fish exports are still rising in absolute terms, but the viability of the sector is at risk (figure 14). The government has repeatedly announced initiatives to reduce overexploitation, but implementation has been weak.

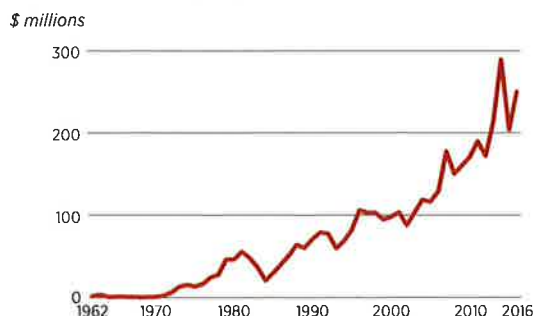
**Manufacturing.** The French colonial system left Senegal with an established textile industry, but it consisted mainly of inefficient and highly protected enterprises.<sup>89</sup> Over the past few decades, the large textile firms have gone bankrupt. Clothing has been identified by various government administrations as possibly offering a comparative advantage, but Senegal has been unable to develop a competitive clothing industry. A weak business climate and competition from Asia undermine Senegal's comparative advantage in high-quality, African-designed printed cloth and labor-intensive garment exports.

Recently, manufactured exports have increased considerably as a share of Senegal's exports, but they consist overwhelmingly of capital-intensive goods, mainly cement and phosphoric acid and other chemicals related to processing phosphates (figure 15). Correspondingly, exports of labor-intensive products such as clothing, textiles, and footwear have dropped to near zero as a share of exports (figure 16).

**Horticulture.** Despite a climate and location favorable for off-season exports of horticulture products to the European market, horticulture remains underexploited. Senegalese producers face supply-chain constraints in equipment, water supply, and access to inputs. The increasing necessity of global Good Agricultural Practices quality certification and the entry of multinational firms into Senegalese horticulture have led to consolidation, but most firms remain small. Donor support for horticulture in Senegal has been so substantial that the multitude of external actors and the lack of coordination have undermined the effectiveness of aid. Land tenure and access

**FIGURE 14**

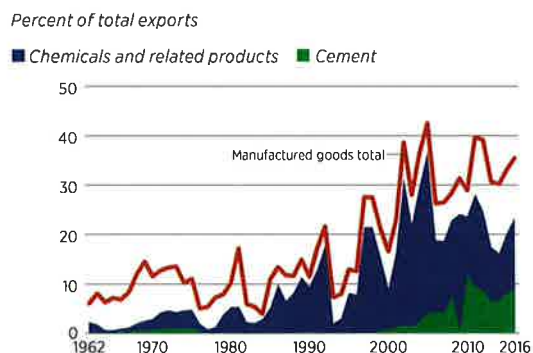
**Senegal's fishing exports, 1962–2016**



Source: MIT Observatory of Economic Complexity database.

**FIGURE 15**

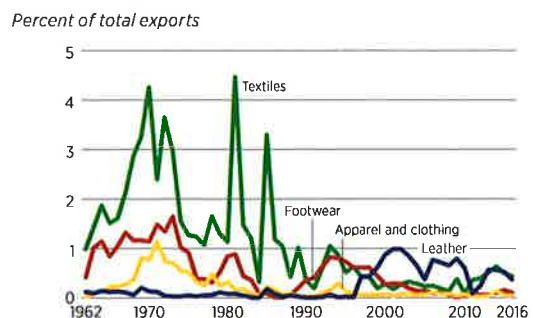
**Senegal manufactured exports, 1962–2016**



Source: MIT Observatory of Economic Complexity database.

**FIGURE 16**

**Senegal's exports of labor-intensive manufactured goods, 1962–2016**

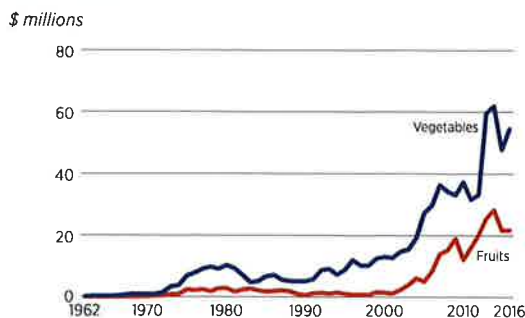


Source: MIT Observatory of Economic Complexity database.

to inputs are also issues.<sup>90</sup> Exports of fruits and vegetables rose until very recently but dropped during the world recession following the global financial crisis of 2008–09. Rice has emerged as an export since 2012 (figure 17).

**FIGURE 17**

**Senegal's exports of fruits and vegetables, 1962–2016**



Source: MIT Observatory of Economic Complexity database.

*Policy recommendations for Senegal*

In the 2000s, the governments of presidents Abdoulaye Wade and Macky Sall continued the Senegalese tradition of announcing ambitious plans to promote private sector development and transform Senegal into an emerging market economy. Wade's 2005 *Stratégie de Croissance Accélérée* (SCA) targeted industrial clusters in sectors such as tourism, agriculture, light manufacturing, and telecommunications with little discernible effect, while Senegal continued to rank near the bottom of the World Bank Doing Business indicators and other measures of the business environment. More recently, the Sall administration unveiled the Plan Sénégal Émergent (PSE) in 2014, which aims to make Senegal an emerging economy through high and inclusive growth, targeting similar sectors to those identified by the SCA.<sup>91</sup> Unlike some previous plans, the PSE showed signs of success as Senegal experienced strong growth in 2015–16. Perhaps not coincidentally, Senegal's rank in the Doing Business indicators improved from 178 of 189 countries in 2013 to 147 in 2016.<sup>92</sup>

Overall, Senegal's economic performance has been disappointing, despite favorable political and geographic circumstances and numerous ambitious reform plans. Senegal has made progress in opening to trade but, despite some recent improvements, ranks poorly in indicators of the business climate. Most perniciously, growth has often been limited to capital-intensive sectors. As in many

other Sub-Saharan countries, lack of employment opportunities, especially for youth and women, is the most pressing development problem. Senegal needs stronger and more labor-intensive growth. Rising growth in the past two years and the tentative emergence of new sectors with employment-generating potential have offered recent signs of improvement.

Senegal has several sectors that could expand employment. They include both traditional sectors such as groundnuts and fishing (whose continuing potential is underutilized), newly emerging export sectors such as hides and horticulture, and possibly labor-intensive manufacturing, notably clothing production (which is almost nonexistent in Senegal, but whose potential should not be abandoned). These sectors face daunting constraints in the institutional environment—red tape, excessive labor market regulations, and underinvestment in and undermaintenance of basic infrastructure.


## Ethiopia

Since 1999, Ethiopia has experienced higher labor force participation, largely due to higher female participation in rural areas, and lower unemployment in both the informal and formal sectors.<sup>93</sup> Formal sector employment was less than 10 percent of the labor force in the mid-2000s.<sup>94</sup> Since 2010, the proportion of informal workers has declined, though the available data do not allow precise estimates.

The structure of output has shifted notably from agriculture to services.<sup>95</sup> From 1996 to 2011, the share of employment in agriculture declined by 3 percentage points (from 81 to 78 percent),<sup>96</sup> and the share of employment in manufacturing increased only slightly, from 0.2 percent to 0.3 percent.

Ethiopia's government has been attempting with some success to emulate East Asian export-led growth of manufacturing through industrial policy. Chinese investments in industrial parks have attracted a great deal of attention. But





manufacturing production and exports, while growing, remain very small, and Ethiopia's growth has been driven largely by public investment, construction, and agriculture.<sup>97</sup>

### *Education and the labor market*

According to the World Bank, Ethiopia is not creating enough jobs for workers with primary and secondary education.<sup>98</sup> In 2012, the non-labor force participation rate was 38.8 percent for workers with basic education, and the sum of non-labor force participation and unemployment was 54.1 percent for workers with intermediate education (see table 8). According to the World Bank's 5th Economic Update for Ethiopia, the service sector is the primary employer of workers with little education but accounted for only 22 percent of employment in 2016.<sup>99</sup>

Workers with higher education also experience the consequences of the mismatch between labor supply and labor demand. Although rising college enrollments reflect Ethiopia's expansion of higher education—from 10,000 students in 1990 to more than 360,000 in 2015—the labor market has struggled to absorb them.<sup>100</sup> For instance, in the 2009/10 academic year, 66,999 students graduated from college and entered the labor force, but the country had only about 6,020 vacancies for skilled workers.<sup>101</sup> The increase of college graduates is expected to continue, since more than 10 new public universities and several private colleges are planned.<sup>102</sup> Seid and coauthors suggest that the expansion of higher education partially explains high unemployment rates and long unemployment duration among college graduates in Ethiopia.<sup>103</sup> The unemployment rate for workers with higher education was 16.6 percent (see table 8), and one study estimated that unemployment lasted 45 months on average among new college graduates.<sup>104</sup>

High rates of unemployment can also result from a skills mismatch between job seekers and newly created jobs. According to the World Bank, manufacturing firms in Ethiopia struggle to recruit workers with sufficient technical and soft skills.<sup>105</sup>

Labor productivity in manufacturing rises with education, perhaps because educated workers are easier to train or are higher-quality workers. Dinh and coauthors found that the productivity gap between Ethiopia and China is caused by less education and worse equipment for Ethiopian than Chinese workers.<sup>106</sup>

Although the Ethiopian government tried to make primary and secondary graduates employable by developing technical and vocational education and training (TVET), few firms recruit TVET workers.<sup>107</sup> A World Bank survey found that only 14 of 60 firms reported contacting TVET institutions to fill outstanding technical positions, and only half of them reported hiring directly from TVET institutions.<sup>108</sup>

### *Sectors with potential comparative advantage and employment*

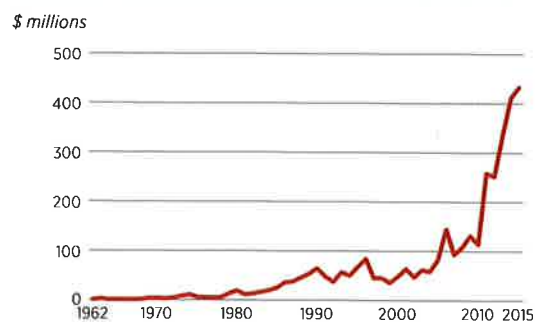
The Ethiopian government has modeled its industrial policy on East Asia's export-oriented and interventionist policies, targeting the leather, footwear, and textile industries.<sup>109</sup>

*Manufacturing.* Government industrial policy for manufacturing has had considerably success with a boost from recent Chinese investments. Further diversification is possible. In late 2017, the Chinese pharmaceutical company Humanwell approved an investment of \$100 million in Ethiopia's pharmaceutical sector.<sup>110</sup> In addition, Ethiopia received \$10.7 billion in loans from China from 2010 to 2015, most being used for Chinese infrastructure projects in Ethiopia.<sup>111</sup> According to the deputy commissioner of the Ethiopian Investment Commission, Ethiopia plans to create 2 million manufacturing jobs by 2025.

Although manufactured exports have increased sharply, they remained low at \$500 million in 2015 (figure 18), and they have declined as a share of total exports, reflecting booming agricultural exports.

Ethiopia has a strong comparative advantage in leather due to its huge livestock inventory and a

**FIGURE 18**  
**Ethiopia manufacturing exports, 1962–2014**

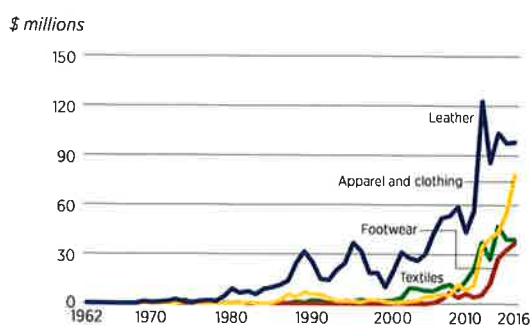


Source: MIT Observatory of Economic Complexity database.

tradition of shoe manufacturing. The industry slumped in the early 2000s as cheap Chinese imports flooded the domestic market, while exports were limited by the low quality of the domestic value chain, from skinning to tanning. The government responded energetically with consulting, training, and marketing programs to boost the quality of locally produced shoes. It also set export and productivity targets and worked with firms to help them meet or readjust goals. The efforts contributed to a revival of the industry.<sup>112</sup> Leather remains the largest manufactured export, and export growth has been very strong in recent years (figure 19).

*Floriculture.* Investor incentives and a favorable climate have propelled Ethiopia's cut flower industry. Floriculture has grown rapidly, with

**FIGURE 19**  
**Ethiopian exports of leather, footwear, textiles, and clothing, 1962–2014**



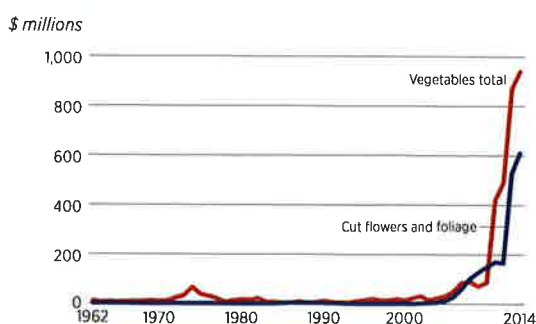
Source: MIT Observatory of Economic Complexity database.

flowers almost overtaking coffee as the main export (figure 20). The industry initially evolved without sector-specific support from the government, and unlike the leather industry, it has been dominated by foreign firms. Cut flower firms benefited, however, from the tax holidays and import duty exemptions given to all exporters. The government later built a close relationship with growers and recently created a semiautonomous agency to provide services to horticulture exporters.<sup>113</sup> Although government incentives and services have helped the cut flower industry develop, it is unclear whether they should continue for a now somewhat developed sector. Vegetable exports have also boomed, while fruit exports are minimal.

#### *Policy recommendations for Ethiopia*

Governance has improved greatly, and Ethiopia has seen strong growth since the early 2000s. Macroeconomic management has generally been sound, and activist industrial policies along with Chinese investment have boosted export-oriented manufacturing and agriculture. In the early 2000s, the business climate improved considerably, but political unrest has since weakened it, and macroeconomic stability has come into question. Wages in the formal sector are unusually competitive for Sub-Saharan Africa, and infrastructure has improved substantially.<sup>114</sup> Export diversification has made progress in recent years, with manufacturing and horticulture exports rising sharply.

**FIGURE 20**  
**Ethiopia exports of cut flowers and vegetables, 1962–2014**



Source: MIT Observatory of Economic Complexity database.



The Ethiopian government is modeling its economic strategy on activist East Asian industrial policies. Overall, the government's sector-specific interventions seem well crafted, but their effects are partially offset by general weaknesses in the business climate. The government has targeted manufactured exports, and they are growing, although from a low base. The Ethiopian government has been far more effective than most others in operating EPZs. However, the interventionist approach has downsides. Limited competition, restrictions on foreign investors, and the privileged access of large state-owned enterprises to resources and to policymakers inhibit further diversification and productivity growth. The business climate, after improving in the early 2000s, has worsened markedly, possibly discouraging further FDI. In short, the results of Ethiopia's industrial policy are promising, but a full assessment is not yet possible.

Ethiopia has succeeded more dramatically in promoting horticultural than manufactured exports. The private sector has played a larger role in horticulture than in manufacturing, underscoring the importance of fostering a dynamic private sector and supporting market forces' role in finding and taking advantage of diversification opportunities.

The macroeconomic context for export diversification is also crucial.<sup>115</sup> Industrial policies will have little effect if they are offset by overvalued exchange rates and weak infrastructure. Ethiopia's 2017 depreciation of the currency is a positive step but has not completely reversed overvaluation. Further real depreciation and maintenance of a competitive exchange rate are crucial because of the risks posed by high external debt and limited foreign exchange reserves, which concern the International Monetary Fund. Competitive exchange rates, investment in infrastructure and education, and macroeconomic stability were crucial to the economic success all East Asian countries—arguably more than targeted industrial policies. The Ethiopian government has done well in pursuing these, but risks to fiscal and external balance stability require prioritization among government

investments and greater reliance on private sector investment.

For the labor market, Ethiopia should invest further in job training for workers of all education levels.<sup>116</sup> Ethiopia could also support job searches by low-skilled and unemployed workers by providing safety nets, labor market programs, and job vacancy information through information and communications technology.

## Benin

Employment in Benin is even more overwhelmingly informal than in other low-income Sub-Saharan countries. In 2011, a staggering 96.2 percent of Benin's nonagricultural employment was in the informal sector.<sup>117</sup> That figure reflects the reliance of Benin's economy on subsistence agriculture (about 25 percent of GDP) and informal re-export trade with Nigeria (about 20 percent of GDP). Agriculture employs more than 70 percent of the economically active population.<sup>118</sup>

### *Employment in cotton*

Benin relies heavily on cotton as a cash crop. The cotton value chain (production, processing, cotton oil, and research) directly provides 40 percent of rural jobs and involves 50 percent of the total population.<sup>119</sup> The cotton industry makes up 13 percent of GDP, and incomes from the cotton value chain have multiplier effects on the art, transport, commerce, and construction sectors.<sup>120</sup>

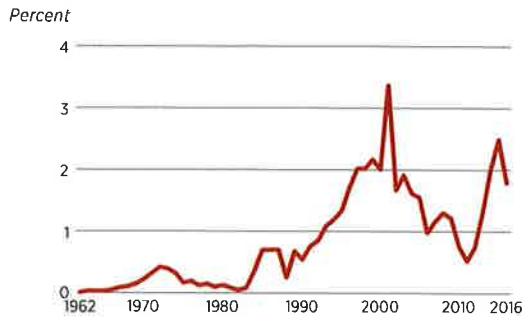
The reliance on cotton creates numerous challenges. Benin's economy is poorly diversified, has low productivity, and is vulnerable to external shocks such as unpredictable rainfall. It thus experiences volatile growth.<sup>121</sup> Worse, the cotton sector has been in a structural crisis for two decades, and output is far below potential. In the 2000s, cotton production and exports plummeted, primarily due to domestic mismanagement of the sector (figure 21).

In the 1990s, African countries, including Benin, began to liberalize their cotton sectors, previously



**FIGURE 21**

**Benin's share of world cotton exports, 1962–2016**



Source: MIT Observatory of Economic Complexity database.

controlled by government marketing boards.<sup>122</sup> Although liberalization made sense in theory, because cotton is not characterized by significant economies of scale, Benin lacked the institutions to give domestic entrepreneurs a larger role in running the sector. For instance, to purchase inputs (such as seed and fertilizer), cotton producers need access to credit, but without strong contract enforcement, banks are unwilling to lend to smallholders. In this environment, farmers have an incentive to evade their credit contracts and sell their cotton at a higher price, while cotton ginners have an incentive to poach cotton from other ginners. In addition, the government sometimes intervenes in favor of special interest groups.

The World Bank recommended clarifying the government's role and concentrating the cotton sector by consolidating into a single dominant firm the functions of ordering inputs, providing credit, negotiating prices, and establishing contracts.<sup>123</sup> But the situation has remained largely unresolved, with repeated ad hoc interventions by the government, often in favor of politically connected cotton ginning firms.<sup>124</sup>

*Employment in cross-border trade*

Benin's informal sector engages in extensive cross-border trade and smuggling, mainly with Nigeria, with which Benin shares a long border. Benin re-exports imported goods to Nigeria, including, rice, cloth, used cars, and frozen poultry, to take advantage of Nigeria's very high import

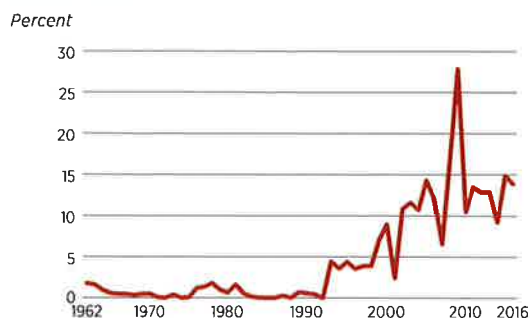
barriers.<sup>125</sup> Benin, with relatively low tariffs, deliberately fosters a customs regime that facilitates official imports that are then smuggled into Nigeria, and the value of goods imported in transit or for re-export is more than twice the value of those imported for domestic use. In 2008, Benin's gross re-export trade made up more than 60 percent of GDP. Cross-border trade generates many employment opportunities for workers who handle merchandise at ports and transport it to Nigeria. Used car markets in Benin's capital, Cotonou, directly employ 10,000 to 15,000 people in importing, selling, storing, and driving cars, and they employ thousands more indirectly.<sup>126</sup> While cross-border trade is one of Benin's most important industries, it is highly vulnerable to the vagaries of Nigerian policy, and it promotes a culture of rent-seeking and illegality unconstructive for long-term development. Benin should shift to legitimate entrepôt roles by improving its port and trade institutions and infrastructure and cracking down on smuggling.

*Export diversification opportunities*

Over the past decade, Benin's economy has faced a challenging business environment and volatile growth caused by weaknesses in education, total factor productivity, and public investment efficiency.<sup>127</sup> It remains a low-income country with annual per capita income of \$790 in 2015.

Diversifying agricultural exports could raise growth rates, reduce output volatility, and improve within-sector productivity.<sup>128</sup> Consolidating cotton exports and expanding cashew and pineapple exports present possibilities. Benin's nut exports, mainly cashews, have recently increased (figure 22). However, some of those exports may be lower quality cashews smuggled from Nigeria. Benin, like other African producers, does very little domestic processing, but improved infrastructure and technology could increase cashew production and support domestic processing for export.<sup>129</sup>

Pineapples have also long been identified as a product in which Benin has a strong comparative advantage, but progress has been limited. Benin has

**FIGURE 22****Share of edible nuts in Benin's export value, 1962–2016**

Source: MIT Observatory of Economic Complexity database.

distinctively favorable soil and climate conditions for growing pineapples, which have a reputation for very good flavor. Scaling up production is limited by deficient quality control and infrastructure, such as cold storage facilities. The underlying problem for cashews, cotton, and pineapples is the deterrent to agriculture and agro-processing posed by weak policies and institutions in an environment dominated by rents from cross-border trade.<sup>130</sup>

### *Policy recommendations for Benin*

Employment in Benin is dominated by informal labor in cotton cultivation (in the agricultural sector) and cross-border trade (in services). Both of these key sectors are precarious, with considerable potential for raising employment and incomes if reformed.

Stabilizing the cotton sector is the top priority. Benin has a strong comparative advantage in cotton, but the sector's current structure does not optimize the tradeoff between competition and coordination that is at the heart of agricultural value chains. In some respects, Benin now suffers from the worst of both worlds: limited competition and limited coordination due to weak institutions for enforcing compliance. Compliance in the sector could become more self-enforcing by a move toward a more concentrated but market-driven system, obviating the need for an elaborate institutional structure. Many people employed at all levels of the value chain would benefit.

The re-export trade's dynamism, ingenuity, and organizational sophistication indicate a high potential for a thriving market economy. In some ways, infrastructure such as border storage depots and institutions such as import value chains operate far more efficiently in the re-export trade than in the formal economy. Benin's challenge is to channel this energy and creativity in a more sustainable direction. Benin is well placed to serve as a regional trading and service center, benefiting from its proximity to Nigeria, but it must do so legally within the rules of the Economic Community of West African States (ECOWAS). Competitive advantage as a regional trading hub will require an improved business environment. Benin's infrastructure and governance, though better than Nigeria's, are deficient. Benin's low-quality public services extend to the port and customs administration, whose quality is critical for a country with ambitions to serve as a trading center.

To reach emerging market status, Benin must develop its capacity to produce goods and services for regional and international markets, instead of just transshipping goods produced elsewhere. Agriculture offers promising diversification opportunities, notably in pineapples and cashew nuts, but they too are stymied by the weak investment climate. The industrial sector currently makes up only 13 percent of GDP, driven mostly by cotton ginning. Developing a stronger industrial sector could raise productivity in Benin, but thus far pervasive smuggling, low education levels, and poor institutions have impeded that. Escaping the culture of rent-seeking and illegality, developing sustainable business in formal industry and commercial agriculture, and creating employment require improving infrastructure, adopting financial system reforms, and strengthening property rights protection.

### **Burkina Faso**

Burkina Faso's landlocked economy relies largely on agriculture, which employs almost 80 percent of the economically active population. Exports have historically concentrated on cotton, but the

country has experienced a rise in gold mining in recent years. The manufacturing and industrial sectors are underdeveloped, and the services sector, consisting primarily of informal activity in urban areas, is the largest contributor to GDP.<sup>131</sup> In 2016, 91.5 percent of total employment was classified as vulnerable, meaning the sum of own-account workers and contributing family workers.<sup>132</sup> Among women, 93.1 percent are in vulnerable employment, and among men, 86.7 percent.<sup>133</sup> The threat of Islamic terrorism remains a concern, though political stability has been restored.

### *Employment in cotton*

Since 2000, Burkina Faso has been one of the top 10 global exporters of cotton, and it has become the largest African exporter.<sup>134</sup> Cotton is an important source of employment along all parts of the production value chain. Burkina Faso has created a more successful institutional framework than most other African producers of cotton, particularly Benin. Burkina Faso's share of world cotton exports has grown steadily (figure 23), unlike Benin's.

However, cotton-led growth faces several challenges.<sup>135</sup> First, although cotton's profitability is uncertain in the volatile world commodities market, cotton represents about 60 percent of Burkina Faso's total exports. Second, increased cotton production in the 2000s relied on the accumulation of

factors of production (land, labor, and inputs), not increases in productivity. Improving technology in agriculture and the overall economy would generate more sustainable growth but is constrained by corruption, high tax rates, low education levels, and limited access to electricity. Furthermore, although cotton sector growth could spill over into more productive sectors such as textiles, these sectors would need to be expanded first.

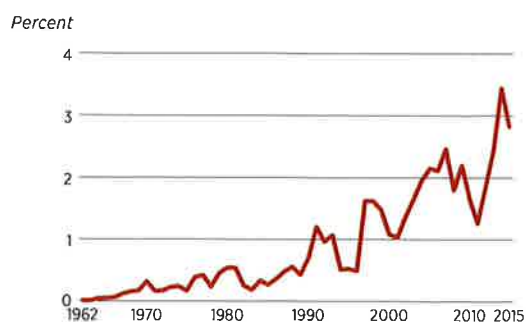
### *Sources of export diversification*

Agriculture provides Burkina Faso's most promising sources of export diversification. The country has a comparative advantage in several fruits and vegetables such as beans, onions, tomatoes, and especially mangoes. Recently, horticultural exports have been boosted with World Bank assistance.<sup>136</sup> Vegetable and especially fruit exports have risen sharply in recent years (figure 24), and farmer incomes have risen substantially. Nevertheless, the amount of exports remains small, and most agriculture is still subsistence farming.

Burkina Faso is attempting to develop EPZs and growth poles. Several EPZs in the capital, Ouagadougou, have had limited success.

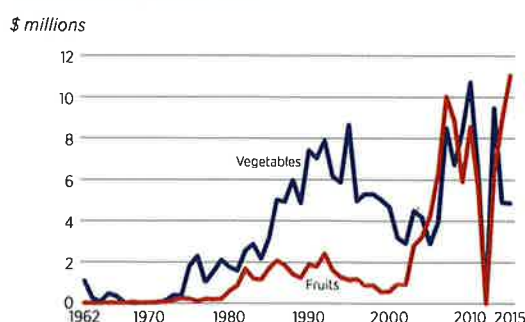
Regional growth poles are perhaps more promising in an agriculture-based economy such as Burkina Faso. The World Bank has worked closely with the government to develop a growth pole in

**FIGURE 23**  
**Burkina Faso's share of world cotton exports, 1962–2014**




Source: MIT Observatory of Economic Complexity database.

**FIGURE 24**  
**Value of Burkina Faso exports of fruits of vegetables, 1962–2014**



Source: MIT Observatory of Economic Complexity database.





the Bagré region—to improve the business environment, develop critical infrastructure, and provide services to small and medium-size firms.<sup>137</sup> The project aims to increase jobs, agricultural production, and private investment. It is slated to close in November 2020. The strategy centers on developing roads and constructing a dam for hydroelectricity, as well as on simplifying the land tenure system to provide land to smallholders and ease access for larger investors establishing plantations. The project is also developing storage facilities and markets, aiming to privatize them eventually.<sup>138</sup> Although very promising, the project has experienced delays, cost overruns, and controversies about displacing small farmers. Private sector investment has been slower than hoped. But the World Bank argues that the project has substantial potential and offers a model for developing other growth poles. In March 2018, arguing that additional financing can address the project's problems, the World Bank approved an additional \$50 million.<sup>139</sup>

### *Youth education and employment*

Youth education levels are particularly low in Burkina Faso. The youth literacy rate was only 50.1 percent in 2014, whereas the Sub-Saharan average is 71 percent.<sup>140</sup> Only 28 percent of students meet math and reading competence requirements after completing their primary education.

Although youth literacy is low, youth employment is relatively high, reaching 42.1 percent of those ages 5–14.<sup>141</sup> Youth work in carpentry, cotton harvesting, and, increasingly, gold mining. But child trafficking and sexual exploitation are also common in Burkina Faso, reflecting the paucity of remunerative activities. The World Bank's Burkina Faso–Youth Employment and Skills project, slated for completion in December 2018, aims to increase access to temporary employment opportunities for not-in-school youth, mainly through labor-intensive public works.<sup>142</sup>

### *Policy recommendations for Burkina Faso*

Burkina Faso is overwhelmingly agricultural, and efforts should focus on raising incomes through

higher quality and value chain productivity for cotton and other export crops. The country has boosted cotton exports and diversified agricultural exports into horticulture, but much agriculture remains subsistence-level production. Further growth is promising due to strong European and regional demand for products in which Burkina Faso has comparative advantage, notably mangoes and cashews. The European market, supplied by both sea and air routes, is lucrative, and Burkinabe mangoes could be highly competitive if production and distribution improve. Increased export of onions to regional markets also has considerable potential.


Further progress will require more institutional support for farmers and investment in infrastructure, notably irrigation. Until recent unrest, Mali made important progress in these areas, which Burkina Faso could emulate. Quality norms in developed country markets, a major challenge to scaling up fruit and vegetable exports, call for increased foreign investment and technical assistance. The government should streamline certification for exporters, working with private and official foreign organizations.

Burkina Faso's authorities should also promote the processing of agricultural commodities, especially cotton. Although Burkinabe textile production seems unlikely to be competitive anytime soon, other cotton products such as animal feed and biogas could create employment.

The Bagré growth pole is an interesting innovation that could provide lessons on targeting a region for a big push in infrastructure development and thus attracting private investment.

## **Ghana**

Until recently, Ghana's progress in GDP growth and job creation have been among the best in Sub-Saharan Africa. In 2007, Ghana attained middle-income status when its per capita GDP exceeded \$1,000. In 2011, it reached a peak GDP growth rate of 15 percent, although that figure was driven



primarily by a recalculation of GDP that included sectors not previously counted.<sup>143</sup> From 1991 to 2012, the share of its population living in poverty dropped from 52 percent to 24 percent.<sup>144</sup> At the same time, the share of employment in agriculture fell from 61 percent to 24 percent, while the share of employment in services rose from 36 percent to 48 percent.<sup>145</sup> Accompanying sectoral transformation, job creation has grown consistently by 3–4 percent a year. Whether the jobs created amid Ghana's recent economic gains are high in quality is a concern.

### *Employment structure*

Although Ghana's employment has shifted from agriculture to services, most new jobs in services have been informal and low-productivity, according to Aryeetey and Baah-Boateng.<sup>146</sup> From 1984 to 2013, the informal sector's share of employment rose from 83.8 percent to 88 percent. Earnings differentials among the informal sector, private formal sector, and public sector show the inequality that has accompanied Ghana's growth: in 2013, informal sector earnings were only 37.5 percent of public sector earnings and 32.1 percent of private formal sector earnings.<sup>147</sup>

Ghana's limited creation of formal sector jobs may be due to the concentration of its economic growth in capital-intensive oil and mining, rather than in more labor-intensive manufacturing and agriculture. The World Bank's 3rd Economic Update on Ghana suggests that Ghana could be suffering from early-stage Dutch disease.<sup>148</sup> As evidence, the economic update observes that the rise of extractive industries seems to be limiting growth in agriculture. In 2011, when Ghana began oil production, the agriculture sector grew by only 0.8 percent while the industrial sector grew by over 41 percent. Over 2010–16, the share of agriculture in GDP fell from 29.8 percent to 18.9 percent, while the services and industrial sectors both benefited from the oil and gas boom.<sup>149</sup>

### *Labor market constraints*

To combat growing inequality and become a modern middle-class economy, Ghana will need jobs

that are productive, better quality, and higher paying. Ghana's business environment remains quite unfavorable, though better than many in Sub-Saharan Africa. The two largest constraints on firm productivity are access to credit and to technology.<sup>150</sup> Firms in Ghana, especially micro and household enterprises, face high interest rates and struggle to invest in technology while covering the costs of trade. The constraint cited second most frequently by firm managers was inadequate electricity supply: without power, firms cannot take advantage of information technology or capital equipment to produce at night.

To absorb the increasing number of entrants to the labor market, Ghana will need to create 300,000 jobs a year.<sup>151</sup> Creating more productive jobs also requires educating the labor force for them. On the supply-side, Aryeetey and Baah-Boateng argue, the low quantity and quality of education, as well as the skills mismatch between supply and labor market demand, constrain job opportunities.<sup>152</sup> According to their findings, 8 of 10 Ghanaians have less than a secondary education, but most job openings in the formal sector require at least a secondary education. Although education levels have increased in Ghana, the quality of education is low—in 2010, one in five third graders could not read a single word, and one in five could not perform subtraction.<sup>153</sup> Even students with secondary and higher education have high rates of non-labor force participation, showing the failure of education to provide skills that employers seek.

Corroborating the skill mismatch, Aryeetey and Baah-Boateng found that Ghana has a shortage of high-skilled and semiskilled workers.<sup>154</sup> They cite anecdotal evidence that when Ghana started commercial oil production, the industry relied on workers from Côte d'Ivoire and Nigeria for engineering, drilling, production, and operation because Ghana lacked workers with those specialized skills. In 2012, 45 percent of workers were underqualified for their jobs, 49 percent were correctly matched, and only 6 percent were overqualified.<sup>155</sup>

### *Sectors with potential comparative advantage*

**Gold.** Gold has become Ghana's largest export, but gold mining is not labor intensive.

**Cocoa.** Ghana is one of the world's leading producers of cocoa, but its world market share is well below its level 30 years ago (figure 25). Cocoa farming is relatively lucrative, and poverty is low among cocoa farmers. However, production has declined. The World Bank faults the price-setting and organizational functions of Cocobod, the Ghanaian government marketing board.<sup>156</sup> Cocobod provides stability to the system, pays farmers promptly, and has raised quality so that Ghanaian cocoa receives a small premium over world prices. Nevertheless, implicit taxation of farmers is higher than in Côte d'Ivoire and Asia. Providing more autonomy to farmers and reducing the government's implicit taxation of cocoa exports would encourage farmers to expand production and quality and boost producer incomes.

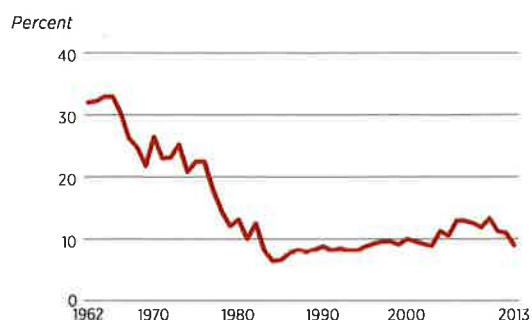
In the longer term, a general modernization of the cocoa sector through more capital investment (mechanization) and more skilled labor would raise productivity and incomes. The average cocoa farm is less than 50 acres, and the average age of cocoa farmers is above 50. Land tenure is contentious because of chieftaincy disputes, making it difficult to develop large-scale farms. Ghana's neighbor, Côte d'Ivoire, by mechanizing cocoa

farming, has surpassed Ghana's production. Also, Ghanaian cocoa farmers have less than a secondary school education on average, making it difficult for new improvements in farming to catch on.

**Horticulture.** Ghana has enormous potential in horticulture. Pineapples, in particular, are regarded as promising, and pineapple exports to the European Union grew rapidly between 2000 and 2010. But a new variety developed in Costa Rica in the mid-2000s has proved very popular in Europe. The drop in demand for Ghanaian pineapples, along with difficulties in meeting European quality norms, led to a steep decline in Ghana's fruit exports after 2010 (figure 26). Vegetable exports have also dropped.

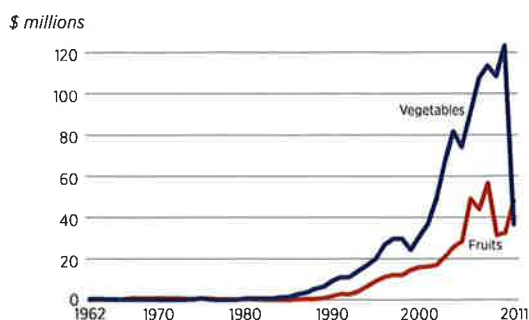
Horticultural performance has been constrained by a low-end strategy, which enabled exports to the European Union at low prices but earned Ghana a reputation for poor quality. External assistance is needed to repair the sector's interrupted cold chain, which contributes to that negative image and constrains horticultural development in Ghana and elsewhere in Sub-Saharan Africa. Quality standards and Good Agricultural Practices certification, which have been reached by the largest exporters, must be extended to all horticultural players through donor-funded awareness programs and technical support. Although external aid is crucial, Ghana suffers from an ill-coordinated overabundance of external support

**FIGURE 25**  
**Ghana's share of the world cocoa market, 1962–2016**




Source: MIT Observatory of Economic Complexity database.

**FIGURE 26**  
**Ghana's exports of fruits and vegetables, 1962–2012**



Source: MIT Observatory of Economic Complexity database.





agencies and their domestic partners, many of them ineffective.<sup>157</sup>

*Services.* Ghana may do better in developing services than manufacturing. Given many English-speaking graduates, such services as tourism and business process outsourcing have high potential. The tourism sector is, however, underdeveloped compared with that in other African countries, and the government seems unaware of the employment opportunities and foreign exchange flows tourism brings. Attracting outsourcing services, such as call centers, is impeded by weak telecommunications infrastructure. Unions that agitate for higher wages are also viewed as a problem.<sup>158</sup>

#### *Policy recommendations for Ghana*

To improve the quality of jobs as its population continues to grow, Ghana should create more jobs in the formal sector and more productive jobs in agriculture and the informal sector, where most Ghanaians work. To improve informal sector productivity, Ghana should adopt policies that upgrade technology, improve access to markets, and provide better access to credit.<sup>159</sup>

The government needs a more nuanced policy for the informal sector, assisting small firms with financing and capacity building while forcing large firms to register and pay taxes. The Francophone countries of West Africa have instituted a two-tiered framework for formal and informal firms that taxes informal firms at a low lump sum. Although that scheme is far from perfect, Ghana could benefit from moving in a similar direction.

Improved education and infrastructure are key for boosting labor-intensive exports in services, agriculture, and manufacturing. Investing in education to improve the labor force's skills would be vital to meeting labor demand in new and more productive jobs.

Ghana's strongest comparative advantage is in agriculture and agro-processing. Mechanization and increased use of skilled labor would boost agricultural exports. Cocoa farming, even with

some mechanization, is labor-intensive, holding the potential to create high-paying jobs and reduce poverty. Although Cocobod's management of the cocoa sector has some significant advantages, increased farmer autonomy and reduced implicit taxation would foster greater production and quality. Processing agricultural produce can create synergies between agriculture and manufacturing.<sup>160</sup>

For nontraditional export crops such as horticultural products, attracting more foreign investment offers opportunities for building skills and market access. Multinational food distributors have the know-how to form outgrower networks with small farmers that boost productivity and quality.


The government should encourage young university graduates to enter cash crop farming in cocoa and horticulture. Publishing data on earnings in cash crop farming would be one simple step. If young people perceive the returns on farming to be high, they will enter farming rather than migrate to cities.

Ghana, as an English-speaking country with good political and economic stability, has high potential for tourism and exports of business services. These sectors particularly would benefit from improved education and infrastructure investment, especially in telecommunications.

## **CONCLUSIONS AND POLICY RECOMMENDATIONS**

Low- and low-middle-income African economies have a massive underemployment problem. Approximately 90 percent of the labor force is employed in the informal sector, with very low wages, no social protections, and irregular working hours. Thus, poverty levels remain elevated and social discontent simmers in the face of limited opportunities, especially for women and youth.

This study has described the conditions of the labor market and attempted to diagnose the underlying



causes of underemployment. It has focused on five Sub-Saharan countries: Benin, Burkina Faso, Ethiopia, Ghana, and Senegal, and four comparator countries that have achieved poverty reduction through rapid absorption of the labor force into formal sector employment. The analytical framework identifies supply-side and demand-side constraints on employment using a combination of quantitative and qualitative approaches.

### **Supply side**

On the supply side, the labor market confronts working-age populations that are growing rapidly with little evidence of a major demographic transition toward lower population growth. Although educational attainment has improved significantly in the African focus countries, it lags behind that in the comparators. Alarming, workers with secondary and tertiary education have high levels of nonemployment—they are out of the labor force or unemployed—suggesting that higher levels of education alone do not guarantee employment. That shows the importance of improving the quality of education as well as its quantity. The education system often fails to impart the practical skills sought by employers. Vocational training must also be improved through additional resources and, equally important, through collaboration with the private sector to ensure that workers receive training useful to employers.

### **Demand side**

The demand side of the labor market is even more important. Improving education and skills is only useful for boosting employment if labor-intensive sectors of the economy are growing and demanding the services of skilled workers. The lessons of the comparator countries are clear: export-led growth of labor-intensive manufactured goods such as clothing and shoes played a crucial role in boosting employment, particularly for women, in Bangladesh, China, Mauritius, and Viet Nam. Although wages are typically very low among competitive exporters, at least initially, the incomes and security of factory jobs are a


vast improvement over subsistence farming and street-hawking. Further, over time, export-oriented industries upgrade technologically and wages rise, as China illustrates most dramatically. Equally important, rising incomes and opportunities for women promote a demographic transition, lowering births and population growth, and eventually contributing to redressing the imbalance of supply and demand in the labor market.

The analysis suggests the importance of fostering export competitiveness by attracting foreign investment and technology, while keeping wages low until productivity rises. Are targeted government policies or general improvements in the business climate the key to international competitiveness and labor-intensive exports? This study has argued that both are important and mutually reinforcing.

Supportive policies and a reasonably well-functioning business climate have been crucial to the successful low-income exporters. Countries such as China, Mauritius, and Viet Nam lured foreign investment through a combination of low wages and good infrastructure. However, countries pursue different strategies, and a range of approaches are possible. Bangladesh, for example, with an early start, very low wages, and a strong business association has developed a booming garment export industry employing millions of women, while ranking poorly on many measures of the investment climate, including corruption and infrastructure quality. This was made possible by a powerful business association that organized the garment sector and insulated it from government corruption and mismanagement.

Improvements in economy-wide infrastructure and institutions, moreover, may take a long time. Short-cuts are possible in the form of export processing zones (EPZs) or regional growth poles, and business incubators have proved useful in some circumstances, especially in Asia.

EPZs have proven useful in a number of Asian and Latin American economies, most famously China,



in attracting foreign investment in manufacturing and building domestic capabilities. In Africa, however, EPZs have largely failed. The most successful has been in Mauritius, where it was the starting point for the structural transformation of a mono-crop economy (based on sugar) into a clothing exporter, creating employment for many people, particularly women (as in Bangladesh). The Mauritian case reveals the potential of EPZs for Africa. However, the experience of Senegal also reveals the pitfalls. The timing and design of the EPZs in Senegal and Mauritius were similar, yet in Senegal the EPZ utterly failed. In Senegal, progress was slow in employment growth, population growth, and poverty decline, while in Mauritius, employment rose, population growth dropped, and poverty plummeted. The fundamental differences appear to be the overall investment climate and the government's commitment to make the EPZ work. As Madani put it, Mauritius was in effect "one big EPZ."<sup>161</sup> This result underlines the importance of combining targeted measures such as EPZs with overall sound policies such as investing in education and infrastructure and maintaining competitive exchange rates. More recently, Ethiopia, working closely with Chinese investors, provided another positive example of targeted industrial development, although political instability and macroeconomic pressures suggest caution in evaluating the Ethiopian case.

EPZs mainly aim at larger firms. But the pervasive informal sector, comprising very small enterprises, is a common feature of African economies. Assisting small and medium-size enterprises boost productivity is another important way of improving employment opportunities. Business incubators, like EPZs, are designated areas for bringing together and assisting firms—in this case small

and medium-size firms that require technical assistance (finance, marketing, accounting, managerial, and so on). Incubators aim to provide firms with business services and to connect them with experienced mentors. Like other business assistance programs, incubators will succeed only if governments work closely with the private sector to learn the needs of their clients and display resourcefulness and flexibility in meeting those needs.

The general lesson for African countries is that expanding employment rapidly requires creating jobs through labor-intensive exports and domestic private sector development while taking individual countries' circumstances and comparative advantages into consideration. Manufacturing is not the only vehicle for exports of labor-intensive products—agricultural exports are an alternative in many countries. Traditional primary products such as groundnuts and cocoa, as well as horticulture (fruits, vegetables, and cut flowers), share many features of manufacturing: in the African context, they are labor-intensive, confront the demanding quality and reliability standards of developed-country markets, and are subject to technological upgrading. Other sectors, such as fishing and tourism, also offer potential for labor-intensive exports.

In the end, raising employment in the formal sector requires a commitment of public policy to improve the competitiveness of labor-intensive production, through interventions on both the supply and demand sides of the labor market—developing the practical skills of workers through more and better education, and improving the business environment for firms that hire workers.



## ANNEX

### THE LEWIS AND HARRIS-TODARO MODELS OF EMPLOYMENT IN THE FORMAL AND INFORMAL SECTORS

#### Lewis model

Lewis viewed economic development as the expansion of the modern sector, raising formal employment as labor is absorbed from the subsistence sector. Lewis mostly identified the subsistence sector with smallholder farming, but he also explicitly recognized its affinity to what is now known as the urban informal sector:

What we have is not one island of expanding capitalist employment surrounded by a vast sea of subsistence workers, but rather a number of such tiny islands.... We find a few industries highly capitalized such as mining or electric power side by side with most primitive techniques, a few high class shops surrounded by masses of old style traders, a few highly capitalized plantations, surrounded by a sea of peasants.<sup>162</sup>

More formally, the Lewis model focuses on the allocation of labor between the rural/informal sector ( $r$ ) and modern/formal ( $m$ ) sector.  $MPL$  is the marginal productivity of labor, and  $W$  the real wage. Due to a “surplus” of labor,  $MPL$  is very low, with the modern sector consequently facing a perfectly elastic supply of labor at a very low subsistence wage level. For reasons not specified by Lewis, however,  $W_m$  is set exogenously well above the subsistence level  $W_r$ . This could be due to union power, minimum wages, and/or efficiency wage-setting. Modern sector expansion due to capital investment

and/or technological progress raises  $MPL_m$ , boosting employment in the formal sector and absorbing labor from the traditional sector. Eventually, the absorption of labor in the modern sector reaches the “Lewis turning point,” and incomes begin to rise above subsistence levels in the traditional sector.

The modern sector’s output may be modeled using a Cobb–Douglas function (subscript  $m$  suppressed),

$$Q = F(A, K, L) = AK^\alpha L^{1-\alpha}$$

where  $A$  is technology,  $K$  is capital, and  $L$  is labor. Labor market equilibrium implies  $MPL = W$ .

Denoting  $\dot{L} = \frac{dL/dt}{L}$  and likewise for other variables, it is easy to show that:

$$\dot{L} = \frac{\dot{A} + \alpha \dot{K} - \dot{W}}{\alpha}$$

That is, the rate of growth of modern-sector employment depends on technological progress, capital accumulation, and real wage moderation in the formal sector.

#### Harris-Todaro Model

The Harris–Todaro (1970) equilibrium may be stated as:

$$W_m \frac{L_m}{L - L_r} = W_r$$

where  $L - L_r$  is the urban labor force and  $\frac{L_m}{L - L_r}$  is the probability of finding a job in the modern sector. This model explains why rural–urban migration continues despite high urban unemployment.

## NOTES

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1. Golub and Hayat 2015.
2. Benjamin and Mbaye 2012; Mbaye et al. 2018.
3. Gollin and Ranis 2014.
4. Fox and Pimhidzai 2013; Fields 2012.
5. Informal employment in table 1 is slightly higher than wage employment in Fox and Pimhidzai (2013) because informal employment includes some part-time and informal wage employment.
6. Benjamin and Mbaye 2012; Benjamin and Mbaye 2014; and Golub and Mbaye (forthcoming).
7. The ILO measure of vulnerable employment for Ethiopia seems to have a break in definition of vulnerable employment, as the data show an implausible drop from about 80 percent to 50 percent in 2015.
8. Table 4 does not include unemployment as unemployment rates are not available by gender.
9. Benjamin and Mbaye 2012; Mbaye et al. 2015.
10. African Development Bank 2012.
11. African Development Bank 2012; Gollin and Ranis 2014; Page 2012.
12. Golub and Mbaye 2002.
13. Golub and Hansen-Lewis 2012.
14. Lewis 1954. This section draws on Golub and Hayat (2015) and Golub, Bernhardt and Liu (2011).
15. Harris and Todaro 1970.
16. Fields 1975; 1990.
17. Fields 1975.
18. Gaal and Fox 2008.
19. Golub, O'Connell, and Du 2007.
20. Golub et al. 2018.
21. Rodrik 2016; Stiglitz et al. 2013.
22. Fox and Sohnesen 2012.
23. Fox and Thomas 2016; Golub, O'Connell, and Du 2007; Jourdan 2013. Lewis himself recognized that the distinction between traditional and modern activities did not coincide with rural and urban (see the annex).
24. Brenton, Newfarmer, and Walkenhorst 2009; Golub, O'Connell, and Du 2007.
25. Lin 2011.
26. Rodrik 2014.
27. Lin and Monga 2010.
28. Golub, Jones, and Kierzkowski 2007.
29. Monga 2014.
30. Golub, Jones, and Kierzkowski 2007.
31. Dollar and Kraay 2003.
32. Rodrik 2014.
33. World Bank 2018d.
34. Yunus and Yamagata 2012.
35. Golub, Mbaye, and Chwe 2015.
36. Golub et al. 2018.
37. Golub et al. 2018.
38. Lin and Monga 2010; Rodrik 2014.
39. International Labour Organization 2014.
40. Maurer and Degain 2010.
41. Farole 2010.
42. Auty 2011.
43. Zeng 2010.
44. Brautigam and Xiaoyang 2011.
45. Bheenick and Schapiro 1991.
46. UNIDO 2016.
47. Baissac 2011.
48. Mulu 2013.
49. Ackah, Adjasi, and Turkson 2016.
50. Farole 2010.
51. Madani 1999.
52. Madani 1999.
53. Curran et al. 2009.
54. Keesing 1992.
55. Farole 2010.
56. Zeng 2010.
57. Zeng 2015.
58. Curran et al. 2009.
59. Zeng 2010.
60. Newman and Page 2017.
61. International Labour Organization 2014.
62. Glick and Roubaud 2006.
63. Cirera and Laksham 2017.
64. Madani 1999.
65. Sawkut, Vinesh, and Sooraj 2009.
66. Zeng 2015.
67. Newman and Page 2017.
68. Hoffman and Radojevich-Kelley 2012.
69. Canadian Association of Business Incubation. <http://www.canadabusiness.ca/eng/blog/entry/3607/>.
70. Pauwels, Clarysse, Wright, and Van Hove 2016.
71. Zajicek 2017.
72. Sepulveda 2012.

73. Bayen and Giuliani 2018.
74. Cohen 2013.
75. Kelly and Firestone 2016; World Bank 2016b.
76. Fal 2013.
77. Adegoke 2018.
78. Golub, Mbaye, and Chwe 2015.
79. Millennium Challenge Corporation 2017.
80. ANSD 2016.
81. ANSD 2016.
82. Golub, Mbaye, and Chwe 2015.
83. Ministère de la Jeunesse 2014.
84. Office of the United Nations High Commissioner for Human Rights 2015.
85. Africa for Women's Rights n.d.
86. Benjamin and Mbaye 2012; Golub and Hayat 2015. In some large informal sector firms, wages are closer but still below those of the formal sector (Benjamin and Mbaye 2012).
87. Mbaye 2005; World Bank 2017a.
88. Poulton et al. 2004.
89. Golub and Mbaye 2002.
90. English 2016.
91. English 2016; IMF 2017.
92. English 2016.
93. Seid, Taffesse, and Ali 2015.
94. Broussard et al. 2014; Golub and Hayat 2015.
95. Martins 2014.
96. Alternatively, the World Bank Jobs database estimates the decline in the share of agriculture in employment from 1996 to 2011 to be from 88.6 to 75.5 percent.
97. World Bank 2015a.
98. World Bank 2016a.
99. World Bank 2016a.
100. Ministry of Education 2015.
101. Specifically, there were 46,304 reported total vacancies, 13 percent of which were for skilled workers (Ministry of Education 1999–2015, Ministry of Labour and Social Affairs 2009–10).
102. Seid, Taffesse, and Ali 2015.
103. Seid, Taffesse, and Ali 2015.
104. Serneels 2007.
105. World Bank 2015a.
106. Chandra et al. 2012.
107. The reason for firms' low demand of TVET workers is has not been investigated.
108. World Bank 2015a.
109. Altenburg 2010; Gebreeyesus 2016.
110. Sun 2017.
111. Donahue 2018.
112. Altenburg 2010.
113. Altenburg 2010.
114. Golub, Mbaye, and Chwe 2015.
115. IMF 2018b.
116. World Bank 2016a.
117. Charmes 2018.
118. République du Bénin 2014. Alternatively, the World Bank Jobs database estimated that 41.32 percent of employment was in agriculture in 2016. See table on sectoral breakdown of employment.
119. PASCIB 2013.
120. Mbaye et al. 2018.
121. IMF 2018.
122. World Bank 2009.
123. World Bank 2009.
124. World Bank 2015b.
125. Golub 2012.
126. Golub 2012.
127. IMF 2018.
128. IMF 2018b; Papageorgiou, Perez-Sebastian, and Spatafora 2013.
129. World Bank 2015.
130. World Bank 2015.
131. Vitale 2018.
132. World Bank 2017b.
133. Odusola et al. 2017.
134. Vitale 2018.
135. Kaminski 2011.
136. World Bank 2017c.
137. World Bank 2018b.
138. Enhanced Integrated Framework 2014.
139. World Bank 2018b.
140. World Bank 2017a; World Bank 2017c.
141. Bureau of International Labor Affairs 2016.
142. World Bank 2018b.
143. Aryeetey and Baah-Boateng 2015.
144. Honorati and de Silva 2016.
145. Alternatively, the World Bank Jobs database estimates that from 1991 to 2012, the share of agriculture in employment fell from 56 to 43 percent, while the share of services in employment rose from 30 to 42 percent. See the table on sectoral breakdown of employment for Ghana.
146. Aryeetey and Baah-Boateng 2015.



147. Aryeetey and Baah-Boateng 2015.
  148. World Bank 2018a.
  149. The services sector's share of GDP grew from 51.1 percent in 2010 to 56.9 percent in 2016, and the industrial sector's share of GDP has been 26 percent since 2010.
  150. Honorati and de Silva 2016.
  151. Honorati and de Silva 2016.
  152. Aryeetey and Baah-Boateng 2015.
  153. Cloutier, Reinstadtler, and Beltran 2011; Honorati and de Silva 2016.
  154. Aryeetey and Baah-Boateng 2015.
  155. Using the International Labour Organization's quantitative measures of overeducation and undereducation. Honorati and de Silva 2016.
  156. World Bank 2018a.
  157. Golub and McManus 2008.
  158. Oppong 2013.
  159. Honorati and de Silva 2016.
  160. Aryeetey and Baah-Boateng 2015.
  161. Madani 1999.
  162. Lewis 1954, 147.
- Ahmed, F., A. Greenleaf, and A. Sacks. 2014. "The Paradox of Export Growth in Areas of Weak Governance: The Case of the Ready Made Garment Sector in Bangladesh." *World Development* 56: 258–271.
- Altenburg, T. 2010. "Industrial Policy in Ethiopia." German Development Institute, Bonn, Germany.
- ANSD. 2016. "Enquête Nationale sur L'Emploi au Senegal 2015."
- Ansu, Y., M. McMillan, J. Page, and D. W. te Velde. 2016. *African Transformation Forum 2016 Promoting Manufacturing In Africa*. African Center for Economic Transformation.
- Arthur, C. 2017. *A tiny Irish town and China's rise to superpower status*. Retrieved from UNIDO.org: <https://www.unido.org/stories/tiny-irish-town-and-chinas-rise-superpower-status>.
- Aryeetey, E., and W. Baah-Boateng. 2015. *Understanding Ghana's growth success story and job creation challenges*. WIDER Working Paper No. 2015/140, UNU-WIDER, Helsinki.

## REFERENCES

- Ackah, C., C. Adjasi, and F. Turkson. 2016. "Industrial Policy In Ghana." In C. Newman, J. Page, J. Rand, A. Shimeles, M. Soderbom, and F. Tarp (Eds.), *Manufacturing Transformation: Comparative Studies of Industrial Development in Africa and Emerging Asia* (pp. 50–71). Oxford: Oxford University Press.
- Adegoke, Y. 2018. "The problem with simply growing more tech hubs in Africa." *Quartz Africa*. <https://qz.com/1305289/africa-needs-more-tech-hubs-to-drive-innovation-and-entrepreneurship/>.
- Africa for Women's Rights. n.d. "Senegal." [http://www.africa4womensrights.org/public/Dossier\\_of\\_Claims/SenegalENG.pdf](http://www.africa4womensrights.org/public/Dossier_of_Claims/SenegalENG.pdf).
- African Development Bank. 2012. *African Economic Outlook 2012: Promoting Youth Employment*. Tunis: African Development Bank.
- Aglionby, J., and E. Feng. 2018. "China Scales Back Investment in Ethiopia." *Financial Times*. <https://www.ft.com/content/06b69c2e-63e9-11e8-90c2-9563a0613e56>.
- Asian Development Bank. 2016. *Bangladesh: Consolidating Export-led Growth: Country Diagnostic Study*. Mandaluyong City, Philippines: Asian Development Bank. Retrieved from <https://www.adb.org/publications/bangladesh-consolidating-export-led-growth>.
- Auty, R. 2011. "Early Reform Zones: Catalysts for Dynamic Market Economies in Africa." In T. Farole, and G. Akinci (Eds.), *Special Economic Zones* (pp. 207–226). Washington, DC: World Bank.
- Baissac, C. 2011. "Planned Obsolescence? Export Processing Zones and Structural Reform in Mauritius." In T. Farole and G. Akinci (Eds.), *Special Economic Zones* (pp. 227–244). Washington, DC: World Bank.
- Basu, K. 2018. "Why Is Bangladesh Booming." *Project Syndicate*. <https://www.project-syndicate.org/commentary/bangladesh-sources-of-economic-growth-by-kaushik-basu-2018-04>.
- Bayen, M., and D. Giuliani. 2018. *1000 Tech Hubs are Powering Ecosystems in Asia Pacific and Africa*. Retrieved from GSMA: <https://www.gsma.com/mobilefordevelopment/programme/ecosystem>



- accelerator/1000-tech-hubs-are-powering-ecosystems-in-asia-pacific-and-africa/.
- Benjamin, N. and Mbaye, A. A. (2012). *The Informal Sector in Francophone Africa: Firm Size, Productivity and Institutions*. Washington DC: World Bank.
- . 2014. “Informality Growth and Development in Africa.” In C. Monga and J.Y. Lin (eds.), *Oxford Handbook on Africa and Economics*. New York: Oxford University Press.
- Bheenick, R., and M. Schapiro. 1991. “The Mauritian Export Processing Zone.” *Public Administration and Development* 11: 263–267.
- Brautigam, D., and T. Xiaoyang. 2011. “African Shenzhen: China’s Special Economic Zones in Africa.” *Journal of Modern African Studies* 49 (1): 27–54. doi:10.1017/S0022278X10000649.
- Brenton, P., R. Newfarmer, and P. Walkenhorst. 2009. “Avenues for Export Diversification: Issues for Low-Income Countries.” Working Paper No. 47, Commission on Growth and Development, Washington, DC.
- Broussard, N. H., J. Page, T. Gebrekidan, T. Ferede, and H. T. Reda. 2014. “Ethiopia.” In Hiroyuki Hino and Gustav Ranis (Eds.), *Youth and Employment in Sub-Saharan Africa: Working but Poor*. New York: Routledge.
- Bureau of International Labor Affairs. 2016. “Findings on the Worst Forms of Child Labor.” Washington, DC: United States Department of Labor.
- Burke, J. 2013. “Majority of Bangladesh Garment Factories ‘Vulnerable to Collapse.’” Dhaka, Bangladesh: Guardian News and Media Limited.
- Canadian Association of Business Incubation. 2010. “Hatching your start-up through business incubation.” Blog post. Canada Business Network. <https://canada.business.ca/blog/hatching-your-start-up-through-business-incubation-1/?it=eng/blog/entry/3607/>.
- Chandra, V., F. Cossar, H. T. Dinh, and V. Palmade. 2012. *Light Manufacturing in Africa: Targeted Policies to Enhance Private Investment and Jobs*. Washington DC: World Bank.
- Charmes, J. 2018. *Informality, Solidarities, Unpaid care work. Forms of Resilience in Developing Countries*. Springer.
- Cirera, X., and R. W. Laksham. 2017. “The Impact of Export Processing Zones on Employment, Wages, and Labour Conditions in Developing Countries: Systematic Review.” *Journal of Development Effectiveness* 9 (3): 344–360. doi:10.1080/19439342.2017.1309448.
- Cisse, F., J. E. Choi, and M. Maurel. 2017. “Industrial Policy in Senegal.” In C. Newman, J. Page, J. Rand, A. Shimeles, M. Soderbom, and F. Tarp (Eds.), *Manufacturing Transformation: Comparative Studies of Industrial Development in Africa and Emerging Asia* (pp. 136–154). Oxford: Oxford University Press.
- Cloutier, M. H., C. Reinstadtler, and I. Beltran. 2011. “Making the Grade: Assessing Literacy and Numeracy in African Countries.” DIME Brief, World Bank, Washington, DC.
- Cohen, S. 2013. “What Do Accelerators Do? Insights from Incubators and Angels.” *Innovations: Technology, Governance, Globalization* 8 (3–4): 19–25. [https://doi.org/10.1162/INOV\\_a\\_00184](https://doi.org/10.1162/INOV_a_00184).
- Curran, S., J. Cook, K. Hampton, C. Clark, G. Yorgey, and L. C. Anderson. 2009. *The Impacts of Special Economic Zones*. Evans School of Public Affairs, Evans School Policy Analysis and Research (EPAR). Seattle, WA: University of Washington.
- Dollar, D., and A. Kraay. 2003. “Institutions, Trade, and Growth.” *Journal of Monetary Economics* 50 (1): 133–162.
- Donahue, B. 2018. “China is Turning Ethiopia into a Giant Fast-Fashion Factory.” *Bloomberg*. <https://www.bloomberg.com/news/features/2018-03-02/china-is-turning-ethiopia-into-a-giant-fast-fashion-factory>.
- English, P. 2016. “Senegal: A Service Economy in Need of an Export Boost.” Draft, UNU-WIDER, Helsinki.
- Enhanced Integrated Framework. 2014. *Burkina Faso Etude Diagnostique sur l’Intégration Commerciale* (Diagnostic Trade Integration Study). Geneva.
- Fal, M. 2013. “Accelerating Entrepreneurship in Africa.” *Innovations: Technology, Governance, Globalization* 8 (3–4): 149–168. [https://doi.org/10.1162/INOV\\_a\\_00193](https://doi.org/10.1162/INOV_a_00193).
- Farole, T. 2010. *Second Best? Investment Climate and Performance in Africa’s Special Economic Zones*. Washington, DC: World Bank.

- 
- . 2011. *Special Economic Zones in Africa*. Washington, DC: World Bank.
- Fields, G. S. 1975. "Rural-urban migration, urban unemployment and under-development, and job-search security in LDCs." *Journal of Development Economics* 2 (2): 165–187.
- . 1990. "Labor Market Modelling and the Urban Informal Sector: Theory and Evidence." In D. Turnham, B. Salomé, and A. Schwartz (Eds.), *The Informal Sector Revisited*. Paris: Organisation for Economic Cooperation and Development.
- . 2012. *Working Hard, Working Poor*. New York: Oxford.
- Gaal, M. S., and L. Fox. 2008. *Working Out of Poverty: Job Creation and the Quality of Growth in Africa*. Washington DC: World Bank.
- Fox, L., and O. Pimhidzai. 2013. "Different Dreams, Same Bed: Collecting, Using, and Interpreting Employment Statistics in Sub-Saharan Africa—the Case of Uganda." Policy Research Working Paper No. 6184, World Bank, Washington, DC.
- Fox, L., and T. P. Sohnesen. 2012. "Household Enterprises in Sub-Saharan Africa: Why They Matter for Growth, Jobs, and Livelihoods." Policy Research Working Paper No. 6184, World Bank, Washington, DC.
- Fox, L., and A. Thomas. 2016. "Africa's Got Work to Do: A Diagnostic of Youth Employment Challenges in Sub-Saharan Africa." *Journal of African Economies* 25: i16–i36.
- Francoise, N. 2017. *Chinese Investors in Ethiopia: The Perfect Match?* Paris: Institut Français des Relations Internationales.
- Frankel, J. 2012. *Mauritius: African Success Story*. Cambridge, MA: Harvard University Center for International Development.
- Gebreeyesus, M. 2016. "Industrial Policy and Development in Ethiopia: Evolution and Present Experimentation." Learning to Compete Working Paper No. 6, Brookings Institution, Washington, DC.
- Glick, P., and F. Roubaud. 2006. "Export Processing Zone Expansion in Madagascar: What are the Labor Market and Gender Impacts?" *Journal of African Economies* 15 (4): 722–756. doi:10.1093/jae/ejk016.
- Gollin, D., and G. Ranis. 2014. *Youth and Employment in Sub-Saharan Africa*. London: Routledge.
- Golub, S. S. 2012. "Entrepot Trade and Smuggling in West Africa: Benin, Togo and Nigeria." *The World Economy* 35 (9): 1139–1161.
- Golub, S. S., and A. A. Mbaye. 2002. "Obstacles and Opportunities for Senegal's International Competitiveness: Case Studies of the Peanut Oil, Fishing and Textile Industries." Africa Region Working Paper Series No. 37, World Bank, Washington, DC.
- Golub, S. S., R. W. Jones, and H. Kierzkowski. 2007. "Globalization and Country-Specific Service Links." *Journal of Economic Policy Reform* 10 (2): 63–88.
- Golub, S. S., S. O'Connell, and W. Du. 2007. "Export Competitiveness and Development in Least-Developed Countries." Swarthmore, PA: Swarthmore College.
- Golub, S. S., and J. McManus. 2008. "Horticulture Exports and African Development." Paper prepared for UNCTAD, Geneva.
- Golub, S. S., A. Bernhardt, and M. Liu. 2011. "Development and Trade Strategies for Least Developed Countries." Paper prepared for UNCTAD, Geneva.
- Golub, S. S., and J. Hansen-Lewis. 2012. "Informal Trading Networks in West Africa." In N. Benjamin and A. A. Mbaye (Eds.), *The Informal Sector in Francophone Africa*. Washington, DC: World Bank.
- Golub, S. S., and F. Hayat. 2015. "Employment, Unemployment and Underemployment in Africa." In J. Y. Lin and C. Monga (Eds.), *Handbook of Africa and Economics*. New York: Oxford University Press.
- Golub, S. S., A. A. Mbaye, and H. Chwe. 2015. "Labor Market Regulations in Sub-Saharan Africa, with a Focus on Senegal." Development Policy Research Unit Working Paper 201505, DPRU, University of Cape Town.
- Golub, S. S., J. Ceglowski, A. A. Mbaye, and V. Prasad. 2018. "Can Africa Compete with China in Manufacturing?" *The World Economy*.
- Golub, S. S., and A. A. Mbaye (Eds.). Forthcoming. *The Informal Sector in Central and West Africa*. Cape Town: University of Cape Town Press.




- Harris, J. R., and M. P. Todaro. 1970. "Migration, Unemployment and Development: A Two-Sector Analysis." *American Economic Review* 60 (1): 126–142.
- Hoffman, D. L., and N. Radojevic-Kelley. 2012. "Analysis of Accelerator Companies: An Exploratory Case Study of Their Programs, Processes, and Early Results." *Small Business Institute Journal* 8 (2): 54–70.
- Honorati, M., and S. J. de Silva. 2016. *Expanding Job Opportunities in Ghana*. Washington, DC: World Bank.
- IMF (International Monetary Fund). 2017. "Senegal: Selected Issues." Country Report, IMF, Washington, DC.
- . 2018a. "Benin: Selected Issues." Country Report, IMF, Washington, DC.
- . 2018b. "The Federal Democratic Republic of Ethiopia: 2017 Article IV Consultation." Country Report 18/18, IMF, Washington, DC.
- ILO (International Labour Organization). 2014a. *Trade Union Manual on Export Processing Zones*. Bureau for Workers' Activities. Geneva.
- . 2014b. *Wages and Working Hours in the Textiles, Clothing, Leather and Footwear Industries*. Geneva: ILO Publications.
- . 2017. *Upgrading Skills in Bangladesh: Lower Staff Turnover, Higher Benefits for Employers and Employees Alike*. Geneva. [http://www.ilo.org/global/about-the-ilo/newsroom/features/WCMS\\_577464/lang-en/index.htm](http://www.ilo.org/global/about-the-ilo/newsroom/features/WCMS_577464/lang-en/index.htm).
- . 2018. *Export Processing Zones*. Geneva. [http://www.ilo.org/actrav/areas/WCMS\\_DOC\\_ATR\\_ARE\\_EPZ\\_EN/lang-en/index.htm](http://www.ilo.org/actrav/areas/WCMS_DOC_ATR_ARE_EPZ_EN/lang-en/index.htm).
- . n.d. ILOSTAT [database]. Geneva.
- International Trade Center. n.d. *Bangladesh Trade Indicators*. Retrieved from International Trade Center Trade Map: <https://www.trademap.org/Index.aspx>.
- IPRCC (International Poverty Reduction Center in China) and UNDP (United Nations Development Programme). 2015. *If Africa Builds Nests, Will the Birds Come?* New York and Beijing.
- Jourdan, P. 2013. "Toward a Resource-Based African Industrialization Strategy." In J. Stiglitz, J. Lin, and J. Esteban (Eds.), *The Industrial Policy Revolution II* (pp. 364–385). London: Palgrave Macmillan.
- Kaminski, J. 2011. "Cotton dependence in Burkina Faso: Constraints and opportunities for balanced growth." In P. Chuhan-Pole and M. Angwafo (Eds.), *Yes Africa Can: Success stories from a dynamic continent* (pp. 107–124). Washington, DC: World Bank.
- Keesing, D. 1992. *Trends in Export Processing Zones*. Washington, DC: World Bank.
- Kelly, T., and R. Firestone. 2016. *Digital Dividends: How Tech Hubs are Helping to Drive Economic Growth in Africa*. Washington, DC: World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/23645>.
- Kennard, M., and C. Provost. 2016. "Shannon: A Tiny Irish Town Inspires China's Economic Boom." *The Guardian*. <https://www.theguardian.com/cities/2016/apr/19/story-of-cities-25-shannon-ireland-china-economic-boom>.
- Khatiwada, S. 2014. "A Quiet Revolution: Women in Bangladesh." International Labour Organization. [http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_234670/lang-en/index.htm](http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_234670/lang-en/index.htm).
- Lahirini, T. 2018. "One chart shows the pressure from the global supply chain that imperils garment workers." *Quartz*. <https://qz.com/1261588/five-years-after-rana-plaza-the-supply-chain-dynamics-that-imperil-garment-workers-are-still-doing-their-thing/>.
- Lewis, W. A. 1954. "Economic Development with Unlimited Supplies of Labor." *The Manchester School* 22 (2): 139–191.
- Lin, J. Y. 2011. *From Flying Geese to Leading Dragons*. Maupoto: World Bank.
- Lin, J. Y., and C. Monga. 2010. "Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change." Policy Research Working Paper No. 5313, World Bank, Washington, DC.
- Lu, S. 2017. *2017 Fashion Industry Benchmarking Study*. Washington, DC: United States Fashion Industry Association.
- Madani, D. 1999. *A Review of the Role and Impact of Export Processing Zones*. Washington, DC: World Bank.

- Martins, P. 2014. "Structural change in Ethiopia: an employment perspective." Policy Research Working Paper 6749, World Bank, Washington, DC.
- Maurer, A., and C. Degain. 2010. *Globalization and Trade Flows: What You See is Not What You Get!* Geneva: Economic Research and Statistics Division, World Trade Organization.
- Mbaye, A. A. 2005. "Sanitary and Phytosanitary Requirements and Developing Country Agro Food exports: An Assessment of the Senegalese Groundnut Sector." Agriculture and Rural Development Discussion Paper, World Bank, Washington, DC.
- Mbaye, et al. 2015. Secteur informel, environnement des affaires et croissance économique: une analyse comparative de l'Afrique de l'Ouest et du centre.
- Mbaye, A. A., A. Bèye, A. Guèye, B. Lokonon, and Y. Ndione. 2018. "Generating employment and increasing income in agricultural value chains and thereby fostering food security: Case studies of rice and cotton in Benin and Senegal." Discussion Paper 270850, University of Bonn, Center for Development Research, Bonn, Germany.
- Millenium Challenge Corporation. 2017. "Senegal Constraints Analysis Report." <https://www.mcc.gov/resources/doc/report-senegal-ii-constraints-analysis>.
- Ministère de la Jeunesse, de l'Emploi et de la Promotion des Valeurs Civiques. 2014. "L'Emploi des Jeunes au Sénégal: une Priorité Nationale." Dakar.
- Ministry of Education. 1999–2015. Education Statistics Annual Abstracts. Addis Ababa: Ministry of Education, Federal Republic of Ethiopia.
- Ministry of Labor and Social Affairs. 2009–10. "Labor Market Information Bulletin 2009/10." Addis Ababa: Ministry of Labor and Social Affairs, Federal Republic of Ethiopia.
- Monga, C. 2014. "The False Economics of Preconditions: Policymaking in the African Context." *Journal of African Development* 16 (2): 121–140.
- Mosley, P. 2018. "Why Has Export Diversification Been So Hard to Achieve in Africa?" *The World Economy* 41 (4): 1025–1044.
- Mottaleb, K., and T. Sonobe. 2011. "An Inquiry into the Rapid Growth of the Garment Industry in Bangladesh." *Economic Development and Cultural Change* 60 (1): 67–89.
- Mulu, G. 2013. *Industrial Policy and Development in Ethiopia: Evolution and Present Experimentation*. Helsinki: UNU-WIDER.
- Neveling, P. 2015. "Export Processing Zones and Global Class Formation." In J. Carrier and D. Kalb (Eds.), *Anthropologies of Class: Power, Practice, and Inequality* (p. 164). Cambridge University Press.
- Newman, C., and J. M. Page. 2017. *Industrial Clusters: The case for Special Economic Zones in Africa*. Helsinki: UNU-WIDER.
- Odusola, A., R. Lal, R. Dhliwayo, I. Sabo, and J. Neuhaus. 2017. "Drivers of Income Inequality in Burkina Faso, Ghana and the United Republic of Tanzania: A comparative analysis." In *Income Inequality Trends in sub-Saharan Africa: Divergence, determinants and consequences* (pp. 316–341). New York: United Nations Development Program.
- Office of the United Nations High Commissioner for Human Rights. 2015. "Women in Senegal: Breaking the Chains of Silence and Inequality." Press Release. Dakar and Geneva. <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15857&LangID=E>.
- Opong, N. A. 2013. "Call Centre Outsourcing: Comparative Assessment of Ghana's Readiness as a Provider." *European Journal of Business and Management* 20 (5).
- Page, J. 2012. "Youth, Jobs, and Structural Change: Confronting Africa's 'Employment Problem.'" Working Paper No. 155, African Development Bank, Abidjan, Côte d'Ivoire.
- Papageorgiou, C., F. Perez-Sebastian, and N. Spatafora. 2013. "Structural Change through Diversification: A Conceptual Framework." Washington, DC: International Monetary Fund.
- PASCIB. 2013. "La Filière Coton au Bénin: Regard et Analyses Prospectives de la Société Civile." Cotonou Bulletin No. 4, Cotonou, Benin: Friedrich Ebert Stiftung.
- Pauwels, C., B. Clarysse, M. Wright, and J. Van Hove. 2016. "Understanding a new generation incubation model: The accelerator." *Technovation* 50: 13–24.
- Poulton, C., P. Gibbon, B. Hanyani-Mlambo, J. Kydd, M. Larsen, W. Maro, A. Osorio, D. Tschirley, and B. Zulu.

2004. "Competition and Coordination in Liberalized African Cotton Market Systems." *World Development* 32 (3): 519–536.
- République du Bénin. 2014. "Analyse Globale de la Vulnérabilité et de la Sécurité Alimentaire." Cotonou: INSAE.
- Rhee, Y. 1990. "The Catalyst Model of Development: Lessons from Bangladesh's Success with Garment Exports." *World Development* 18 (2): 333–346.
- Rodrik, D. 2014. "The Past, Present, and Future of Economic Growth. Challenge." 57 (3): 5–39. doi: 10.2753/0577-5132570301.
- . 2016. "An African Growth Miracle?" *Journal of African Economies* 1–18. doi:10.1093/jae/ejw027.
- Roubaud, F., and C. Torelli. 2013. "Employment, Unemployment and Working Conditions in Urban Labor Markets of Sub-Saharan Africa: Main Stylized Facts." In P. de Vreyer and F. Roubaud (Eds.), *Urban Labor Markets in Sub-Saharan Africa* (pp. 37–80). Washington, DC: World Bank.
- Sawkut, R., S. Vinesh, and F. Sooraj. 2009. "The Net Contribution of the Mauritian Export Processing Zone Using Cost-Benefit Analysis." *Journal of International Development*, 21 (3): 379–392. doi:10.1002/jid.1489.
- Seid, Y., A. S. Taffesse, and S. N. Ali. 2015. "Ethiopia: An agrarian economy in transition." Working Paper No. 2015/154, UNU-WIDER, Helsinki.
- Sepulveda, F. 2012. *The Difference Between a Business Accelerator and a Business Incubator?* Retrieved from Inc.com: <https://www.inc.com/fernando-sepulveda/the-difference-between-a-business-accelerator-and-a-business-incubator.html>.
- Serneels, P. 2007. "The Nature of Unemployment among Young Men in Urban Ethiopia." *Review of Development Economics* 11 (1): 170–86.
- Staritz, C., and W. Lindsay. 2017. *Made in Ethiopia: The Emergence and Evolution of the Ethiopian Apparel Export Sector*. Roskilde, Denmark: Roskilde University.
- Stiglitz, J., J. Lin, C. Monga, and E. Patel. 2013. "Industrial Policy in the African Context." The World Bank, Office of the Chief Economist, Development Economics. World Bank.
- Sun, I. Y. 2017. "The World's Next Great Manufacturing Center." *Harvard Business Review* (May–June). <https://hbr.org/2017/05/the-worlds-next-great-manufacturing-center>.
- UNDP (United Nations Development Programme). 2015. *Millennium Development Goals Bangladesh Progress Report*. General Economics Division, Planning Commission. <http://www.bd.undp.org/content/bangladesh/en/home/library/mdg/mdg-progress-report-2015.html>.
- UNIDO (United Nations Industrial Development Organization). 2016. *Industrial Free Zones Boost Mauritius' Export-Led Manufacturing*. Vienna. [https://50.unido.org/impact/index.html?\\_ga=2.196832684.1820042042.1528824894-1343307561.1528824894#home/1969-mauritius](https://50.unido.org/impact/index.html?_ga=2.196832684.1820042042.1528824894-1343307561.1528824894#home/1969-mauritius).
- Vitale, J. 2018. *Economic importance of cotton in Burkina Faso*. Rome: Food and Agriculture Organization of the United Nations.
- World Bank. 2009. "Benin Country Economic Memorandum." Report No. 48233, World Bank, Washington, DC.
- . 2013. *World Development Report 2013: Jobs*. Washington DC: World Bank.
- . 2015a. "4th Ethiopia Update: Overcoming Obstacles to the Manufacturing Sector." Working Paper 97916, World Bank, Washington, DC.
- . 2015b. "Benin Diagnostic Trade Integration Study Update." Report No. 97242-BJ, World Bank, Washington, DC.
- . 2016a. "5th Ethiopia Economic Update: Why so idle? Wages and employment in a crowded labor market." Working Paper 110730, World Bank, Washington, DC.
- . 2016b. *Tech Hubs In Africa*. Washington, DC. <http://wbgfiles.worldbank.org/documents/dec/Tech-Hubs-in-Africa.html>.
- . 2017a. "Senegal Groundnut Value Chain Competitiveness and Prospects for Development." Working Paper 117011, World Bank, Washington, DC.
- . 2017b. "Burkina Faso: Agriculture as a Powerful Instrument for Poverty Reduction." Project Brief, World





Bank, Washington, DC. <http://www.worldbank.org/en/results/2017/06/29/burkina-faso-agriculture-as-a-powerful-instrument-for-poverty-reduction>.

———. 2018a. “3rd Ghana Economic Update: Agriculture as an Engine of Growth and Jobs Creation.” Working Paper 123707, World Bank, Washington, DC.

———. 2018b. “Burkina Faso: Bagré Growth Pole Project.” Washington, DC. <http://projects.worldbank.org/P119662burkina-faso-bagre-growth-pole-project?lang=en>.

———. 2018c. “Burkina Faso: Youth Employment and Skills Development.” Washington, DC. <http://projects.worldbank.org/P130735/bf-youth-employment-skills-development?lang=en>.

———. 2018d. *Doing Business 2018: Reforming to Create Jobs*. Washington, DC: World Bank.

World Economic Forum. 2017a. *Global Gender Gap Report*. Cologny, Switzerland: World Economic Forum. <https://www.weforum.org/reports/the-global-gender-gap-report-2017>.

———. 2017b. *The Global Competitiveness Report 2017–2018*. Cologny, Switzerland: World Economic Forum.

<https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018>.

Yardley, J. 2013. “Garment Trade Wields Power in Bangladesh.” *The New York Times*. Dhaka, Bangladesh: New York Times. <https://www.nytimes.com/2013/07/25/world/asia/garment-trade-wields-power-in-bangladesh.html>.

Yunus, M., and T. Yamagata. 2012. *The garment industry in Bangladesh*. Chiba, Japan: IDE-JETRO.

Zajicek, H. 2017. “Accelerator vs. Incubator: Which Is Right for You?” *Entrepreneur*. <https://www.entrepreneur.com/article/294798>.

Zeng, D. Z. 2010. *Building Engines for Growth and Competitiveness in China*. Washington, DC: World Bank.

———. 2010. “How Do Special Economic Zones and Industrial Clusters Drive China’s Rapid Development?” In D. Z. Zheng (Ed.), *Building Engines for Growth and Competitiveness in China* (pp. 1–53). Washington, DC: World Bank.

———. 2015. *Global Experiences with Special Economic Zones*. Washington, DC: World Bank.