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Employment, Unemployment, And Underemployment In Africa

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CHAPTER 8

EMPLOYMENT, UNEMPLOYMENT, AND UNDEREMPLOYMENT IN AFRICA

STEPHEN GOLUB AND FARAZ HAYAT

8.1 Introduction

Generation of “good” jobs and economic development are closely connected. Rising labor incomes are the primary means through which growth is translated into improved standards of living and lower poverty rates. Moreover, employment in “modern” sectors involving skill development and technological learning in turn can promote productivity growth, economic development, and demographic transitions with lower birth rates. The last 50 years have witnessed a virtuous cycle of rapid growth of export-led labor-intensive manufacturing, growth of employment, slowing population growth, and rising wages and living standards in a number of emerging countries, particularly in East Asia (e.g. Pack 1988; Radelet, Sachs, and Lee 1997; World Bank 1993), as labor has been absorbed into modern industry out of subsistence agriculture and urban informal activities. The most dramatic recent example is of course China, where 75 million private sector jobs have been created since China’s opening to the global economy, resulting in the largest poverty reduction program in world history (World Bank 2013: 58).

What about Africa? Much has been made of the emerging “Cheetah” economies of Africa (e.g. The Economist 2011; Radelet 2010) and indeed African growth has picked up substantially since the mid-1990s in many countries and on the continent as a whole. Important strides have been made in health and education indicators. But, relative to other parts of the developing world and in absolute terms, African growth in per capita GDP has been limited and poverty reduction has been disappointing.

African employment consequently remains overwhelmingly informal. This chapter documents and analyzes the predominance of informal employment and argues that lack of demand for labor is the main problem. Integration into the global economy and exports of labor-intensive products are vital to boosting the demand for labor in Africa. Africa has
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some potential to become competitive in light manufacturing, but the most promising avenue for export-led growth in many African countries is agriculture, including traditional cash crops such as cotton, coffee, cocoa, and groundnuts. Contrary to common perceptions, traditional cash crops, which are the source of livelihood for millions of Africans, have many of the features of manufacturing exports: high labor-intensity, potential for quality improvements through technological transfer, and lucrative but quality-sensitive markets in developed countries. The same obstacles inhibit traditional and non-traditional agricultural exports as manufacturing: inhospitable business climates characterized by corruption, high transactions costs, and deficient infrastructure. Section 2 presents the basic facts of pervasive under-employment and dualistic labor markets, section 3 makes the case that underemployment results primarily from lack of demand rather than worker characteristics, section 4 reviews relevant theoretical models, section 5 discusses policies for boosting employment and incomes through export-led growth, and section 6 concludes.

8.2 PATTERNS OF EMPLOYMENT, UNEMPLOYMENT, AND UNDEREMPLOYMENT IN AFRICAN LABOR MARKETS

8.2.1 Employment and unemployment patterns

Data on employment in Africa are sparse and not very up to date. The very concepts of labor force participation, employment, and unemployment used in developed economies are problematic in low-income Africa (Fox and Pimhidzai 2013; Fields 2012). Nevertheless, the available information paints a consistent pattern: African labor markets are marked by sharp dualism with very small formal employment. Agriculture and urban informal sectors feature pervasive underemployment rather than open unemployment. Labor force participation rates in sub-Saharan Africa (SSA) are not dramatically different from other developing regions. The historically unique aspect of African labor markets is the extent of informality (Roubaud and Torelli 2013).

Table 8.1 shows the distribution of employment into government, formal private sector, and informal sector for selected countries, based on labor market surveys, around 2006. Informal employment is defined here as agricultural work, non-wage-employment, and part-time wage employment. For SSA low-income countries, informal employment defined in this way accounts for at least 80 percent of total employment, and often 90–95 percent.\(^1\) In half of the low-income SSA countries in Table 8.1, government employment exceeds formal private sector employment. In all these countries, however, both formal private and

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\(^1\) As Benjamin and Mbaye (2012) note, definitions of the informal sector differ, with various studies using alternative criteria. The overwhelming share of informal employment, however, is not likely to be sensitive to the chosen definition.

\(^2\) Informal employment in Table 8.1 is slightly higher than wage employment in Fox et al. (2013) because informal employment includes some part-time and informal wage employment. See also Note 3.
Table 8.1 Distribution of employment by sector, selected African countries

<table>
<thead>
<tr>
<th>Sub-Sahara low-income</th>
<th>Year of survey</th>
<th>Public sector including state-owned enterprises</th>
<th>Formal private sector</th>
<th>Informal sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>2005</td>
<td>2.6%</td>
<td>2.1%</td>
<td>95.3%</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>2005</td>
<td>4.3%</td>
<td>1.0%</td>
<td>94.7%</td>
</tr>
<tr>
<td>Cameroon</td>
<td>2005</td>
<td>4.9%</td>
<td>4.7%</td>
<td>90.4%</td>
</tr>
<tr>
<td>Congo Rep.</td>
<td>2005</td>
<td>6.3%</td>
<td>1.8%</td>
<td>91.9%</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2005</td>
<td>3.9%</td>
<td>6.2%</td>
<td>89.9%</td>
</tr>
<tr>
<td>Ghana</td>
<td>2010</td>
<td>6.4%</td>
<td>7.0%</td>
<td>86.6%</td>
</tr>
<tr>
<td>Madagascar</td>
<td>2005</td>
<td>NA</td>
<td>NA</td>
<td>86.5%</td>
</tr>
<tr>
<td>Malawi</td>
<td>2004</td>
<td>9.0%</td>
<td>11.5%</td>
<td>79.5%</td>
</tr>
<tr>
<td>Mali</td>
<td>2007</td>
<td>3.1%</td>
<td>0.4%</td>
<td>96.5%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>2004</td>
<td>8.0%</td>
<td>0.3%</td>
<td>91.8%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>2006</td>
<td>3.7%</td>
<td>1.2%</td>
<td>95.1%</td>
</tr>
<tr>
<td>Senegal</td>
<td>2001</td>
<td>1.8%</td>
<td>6.1%</td>
<td>92.1%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2006</td>
<td>3.0%</td>
<td>1.5%</td>
<td>95.5%</td>
</tr>
<tr>
<td>Uganda</td>
<td>2006</td>
<td>2.8%</td>
<td>14.2%</td>
<td>83.0%</td>
</tr>
<tr>
<td>Zambia</td>
<td>2005</td>
<td>5.2%</td>
<td>6.8%</td>
<td>88.0%</td>
</tr>
<tr>
<td>Sub-Sahara middle-income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Botswana</td>
<td>2006</td>
<td>25.0%</td>
<td>37.0%</td>
<td>38.0%</td>
</tr>
<tr>
<td>South Africa</td>
<td>2007</td>
<td>16.0%</td>
<td>45.6%</td>
<td>38.4%</td>
</tr>
<tr>
<td>North Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>2005</td>
<td>30.0%</td>
<td>10.0%</td>
<td>61.0%</td>
</tr>
</tbody>
</table>

Sources: Benin, Burkina Faso, Senegal: Benjamin and Mbaye (2012); Ethiopia, Mali, Malawi, Madagascar, Rwanda, South Africa, Uganda, Tanzania, Nigeria: Stampini et al. (2013); Botswana: Van Klaveren et al. (2009a); Egypt: As’ad (2009); Cameroon, Democratic Republic of Congo: Razafindrakoto et al. (2009); Zambia: Van Klaveren et al. (2009b); Ghana: Data Portal Ghana (2010).

government employment are under 10 percent, and often below 5 percent of the labor force. Informal employment in middle-income SSA economies Botswana and South Africa is lower, although still sizeable at 38 percent in both cases. Egypt, typical of North Africa, is an intermediate case, with 61 percent informal employment, with the bulk of the remainder employed in the public sector (30 percent).

In a study of the urban informal sectors of ten francophone countries, Roubaud and Torelli (2013) confirm the dominance of informal employment even in the capital cities, finding that on average 77 percent of these cities’ labor forces is informally employed.³ Fox et al. (2013) provide a comprehensive analysis of African employment patterns, and find very low levels of wage employment in 2005, typically about 10–15 percent of the labor force.

³ Informal employment in Roubaud and Torelli (2013) includes some workers employed in the formal sector but there is a high correlation between informal employment and workers in the informal sector—97 percent of informal sector jobs are informal while informal employment accounts for 41 percent of the much smaller number of jobs in the formal private sector.
Open unemployment rates are generally very low in low-income SSA, often well below the levels in developed economies, for example, 0.7 percent in Benin, 2 percent in Uganda, 2.3 percent in Burkina Faso, and 2.6 percent in Madagascar. Unemployment is higher in middle-income SSA countries, particularly South Africa (Kingdon and Knight 2004). Also, unlike developed countries, in Africa recorded unemployment rates rise with the level of education, and university graduates tend to have the highest levels of unemployment (African Development Bank 2012). Unemployment is simply not an option for the poor and unskilled, who find refuge in subsistence agriculture and the urban informal sector (Fields 2012). The quality of the unemployment data is open to question, with unemployment and exit from the labor force difficult to distinguish. Nevertheless, it is clear that Africa has an employment rather than an unemployment problem (Fields 2012).

Following independence, almost all African countries adopted highly interventionist import-substitution industrialization (ISI) policies characterized by growth of the public sector and protection of domestic industries. Widespread economic crises in the 1980s led to structural adjustment policies involving contraction of the public sector and reduced protection of formal import-competing industries. Public employment declined in absolute terms, and even more so as a share of the labor force, between the late 1970s and the mid-1990s (Goldsmith 1999). Structural adjustment programs initially also entailed declines in private sector industrial employment as inefficient import-substituting industries collapsed and non-traditional export growth was disappointing. Since about 1995, African growth has picked up, resulting in rising formal employment, but from a low base (African Development Bank 2012; Fox and Gaal 2008).

Growth of wage employment has been insufficient to make much of a dent in underemployment (Kingdon, Sandefur, and Teal 2006; Haywood and Teal 2009; Fox and Gaal 2008; Fox et al. 2013). Private sector wage employment grew too slowly to offset declining public sector employment, or even to keep up with labor force growth in some countries. In recent years, self- and family- (largely urban) employment rose sharply as a share of the labor force. In Zambia, for example, wage employment declined from 25 percent of the labor force in the 1970s to less than 10 percent in 2005 (Fox and Gaal 2008). Wage employment is much lower for women than men.

### 8.2.2 Earnings: dualism and underemployment

Remuneration differs sharply between the formal and informal sectors in African economies. Table 8.2 shows that dualism is much greater in low-income Africa than other developing countries, comparing gross domestic product (GDP) per capita to wages and productivity in manufacturing, for selected countries, based on data availability. Productivity and wages in manufacturing are measured as annual value added and labor compensation per employee, respectively, using United Nations Industrial Development Organization (UNIDO) data. Country use varying definitions of these concepts, and the findings in Table 8.2 should be viewed as general tendencies rather than precise estimates. Also, the formal manufacturing sector is very small in most African low-income countries. See Mbaye and Golub (2002) and Golub and Edwards (2004) for more discussion of international comparisons of labor costs and productivity.

5 UNIDO labor compensation data do not include employer contributions to social insurance funds and fringe benefits. UNIDO statistics cover only formal firms.
Table 8.2 Indicators of labor costs, selected regions and countries

<table>
<thead>
<tr>
<th>Region</th>
<th>Manufacturing wage/GDP per capita</th>
<th>Manufacturing wage/ manufacturing productivity</th>
<th>Minimum wage/GDP per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income sub-Saharan Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cameroon</td>
<td>5.0</td>
<td>0.34</td>
<td>0.43</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>6.1</td>
<td>0.20</td>
<td>1.93</td>
</tr>
<tr>
<td>Ghana</td>
<td>4.9</td>
<td>0.18</td>
<td>0.43</td>
</tr>
<tr>
<td>Kenya</td>
<td>4.7</td>
<td>0.31</td>
<td>1.31</td>
</tr>
<tr>
<td>Lesotho</td>
<td>3.3</td>
<td>0.31</td>
<td>1.14</td>
</tr>
<tr>
<td>Malawi</td>
<td>9.4</td>
<td>0.35</td>
<td>1.05</td>
</tr>
<tr>
<td>Tanzania</td>
<td>4.5</td>
<td>0.23</td>
<td>4.36</td>
</tr>
<tr>
<td>Uganda</td>
<td>8.6</td>
<td>0.09</td>
<td>0.44</td>
</tr>
<tr>
<td>Middle-income sub-Saharan Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mauritius</td>
<td>1.0</td>
<td>0.43</td>
<td>0.17</td>
</tr>
<tr>
<td>South Africa</td>
<td>2.5</td>
<td>0.38</td>
<td>0.29</td>
</tr>
<tr>
<td>North Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>1.8</td>
<td>0.26</td>
<td>0.41</td>
</tr>
<tr>
<td>Morocco</td>
<td>2.6</td>
<td>0.42</td>
<td>1.18</td>
</tr>
<tr>
<td>Tunisia</td>
<td>1.7</td>
<td>0.41</td>
<td>0.58</td>
</tr>
<tr>
<td>East Asia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cambodia</td>
<td>2.9</td>
<td>0.33</td>
<td>0.77</td>
</tr>
<tr>
<td>China</td>
<td>1.1</td>
<td>0.16</td>
<td>0.51</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1.1</td>
<td>0.15</td>
<td>0.54</td>
</tr>
<tr>
<td>Korea</td>
<td>1.4</td>
<td>0.22</td>
<td>0.49</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1.1</td>
<td>0.32</td>
<td>0.34</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.7</td>
<td>0.18</td>
<td>0.54</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>2.0</td>
<td>0.28</td>
<td>0.68</td>
</tr>
<tr>
<td>South Asia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>2.4</td>
<td>0.19</td>
<td>0.68</td>
</tr>
<tr>
<td>Nepal</td>
<td>1.8</td>
<td>0.19</td>
<td>1.21</td>
</tr>
<tr>
<td>Latin America</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>0.7</td>
<td>0.24</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Source: UNIDO Industrial Statistics Database, World Bank World Development Indicators, US State Department, and authors' calculations.

a Manufacturing data around 2005, minimum wages in 2012.

GDP in low-income African countries. The ratio of manufacturing wages to per capita GDP is often about 5 or higher in these countries, and above 2 in all cases. In middle-income SSA countries and North Africa, the differentials are much smaller, especially in Mauritius. In Asia, particularly East Asia, the ratio of manufacturing wages to per capita GDP is usually not far from parity. In Mexico the ratio is actually below 1. Gelb, Meyer, and Ramachandran (2013) and Clarke (2011) also find that African manufacturing wages are very high relative to per capita GDP, using firm-level data.
Roubaud and Torelli (2013) provide further evidence of dualism. They find that earnings are generally much higher in the formal public and private sectors than in the informal sector, resulting in extremely high Gini coefficients for labor income. Public enterprise and to a lesser extent general government earnings are particularly high, well above formal private sector earnings, which in turn are typically double to triple informal sector earnings. The gap between formal and informal earnings is even more pronounced for women than men. Moreover, job tenure is quite long in the formal sector and even in the informal sectors, indicating limited mobility between sectors. Formal sector jobs are primarily held by older workers, which, together with the evidence of limited formal job creation previously noted, suggests that the prospects for young people are even dimmer than the overall statistics suggest (African Development Bank 2012). In addition, Roubaud and Torelli note that the informal sector itself is segmented, as also stressed by Benjamin and Mbaye (2012).

Roubaud and Torelli (2013) also document the pervasiveness of urban underemployment, which they divide into “time-related” underemployment where workers are involuntarily working part-time, and “invisible” unemployment, defined as those workers who earn less than the minimum wage. In addition, the vast majority of the workforce in SSA does not receive any social security or other fringe benefits.

The unsatisfactory nature of African employment opportunities is manifested in workers’ answers to questions about their aspirations. More than half of young workers (aged 15–24 years) surveyed aspire to formal employment in public or private sectors (Roubaud and Torelli 2013), despite the paucity of formal job creation. The African Development Bank (2012), using Gallop poll data, provides similar evidence of mismatch between aspirations of young people and the realities of the job market.

In summary, since the era of structural adjustment, employment opportunities in the public sector have dwindled and the formal private sector has failed to grow sufficiently to absorb the large majority of the working population in agriculture and the urban informal sector, earning very low incomes and lacking access to social insurance programs. Lewis (1954) noted that much of Africa did not fully fit his model of unlimited supply of labor in subsistence activities. However, due to rapid population growth combined with limited development of the formal sector, Lewis’s framework now fits very well for much of low-income Africa, dominated by subsistence agriculture and small-scale informal family firms:

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. (p. 147)

8.3 Causes of Dualism and Underemployment in Africa

There are two main explanations for the large differentials in earnings and pervasive underemployment described above: (i) heterogeneous labor, with the preponderance of the labor force having low human capital and limited skills, and (ii) low demand for labor combined
with labor market segmentation. The labor heterogeneity argument claims that differences in human capital and other worker characteristics explain income differentials. The segmentation argument shifts the focus to the product markets with a shortage of "good" jobs, and rationing of these jobs. It is important to ascertain which of these two explanations is relatively more important in Africa, although of course both likely have some validity. If higher wages depend on raising human capital then the focus of poverty-reduction strategies on education and health in Africa is appropriate. If, however, low demand for labor originates in the product market, improved educational attainments and health outcomes may not be sufficient to boost formal employment, and the focus instead should be on the business climate.

The observed patterns of wages and employment suggest that low demand for labor is the primary cause. In general, education explains only about 30 percent of variations in labor compensation (Mortensen 2005). Although this may reflect unobservable labor skills (Rosenzweig 1988), Mortensen (2005) finds that labor heterogeneity is robust to inclusion of numerous controls. Teal (2011) cites recent evidence showing that segmentation is common in African labor markets, particularly between firms of different sizes. Söderbaum, Teal, and Wambugu (2002) show that when observable and unobservable aspects of human capital are controlled for, wages are much higher in larger firms. Kingdon, Sandefur, and Teal (2006) conclude that non-competitive theories such as efficiency wages and bargaining models explain this effect better than human capital theory. In the formal manufacturing sector, Fox and Oviedo (2008) show that wage premiums do not reflect productivity differences.

Enterprise surveys and poll data provide further evidence that low demand for labor rather than lack of education is the most binding constraint. Respondents to enterprise surveys in Africa tend not to rate lack of education of the labor force as one of the top constraints. The African Development Bank (2012) used Gallop Poll Surveys conducted in ten North African countries (African Development Bank 2012), finding that factors relating to insufficient labor demand (lack of jobs, insufficient government efforts, weak economy, jobs being given to people with connections, and corruption) together account for about two-thirds of the reasons provided. Secondary and tertiary education improves the chances of having wage employment, but even for workers with university education, under-employment and unemployment is the norm. The African Development Bank (2012) reports that only 30 percent of young people with some tertiary education hold wage employment, another 30 percent are in "vulnerable employment", and the remaining 40 percent are unemployed, inactive or discouraged. Open unemployment actually rises with education, as previously noted.

Several other factors contribute to low formal employment. (i) Education may be expanding, but fail to impart useful skills (Page 2012; African Development Bank 2012), creating a mismatch between worker skills and employer needs. (ii) Rapid population growth exacerbates the excess supply of labor in Africa (Fox et al. 2013), offsetting the effects of output growth. To some extent, however, Africa's failure to experience a demographic transition reflects the lack of structural transformation so cause and effect are difficult to distinguish. Third, wages could be driven up by "Dutch Disease" effects in some natural-resource abundant countries, but this cannot explain why informal sector labor incomes are so low relative to formal-sector wages. Moreover, natural resource abundance does not necessarily preclude labor-intensive manufacturing exports, as Malaysia and Indonesia have shown (Fox et al. 2013).
8.4 Models of Dualism and Underemployment

8.4.1 Dualism and structural transformation: the Lewis model

The Lewis (1954) model still provides the starting point for understanding African dualism as resulting from low demand for labor in the modern sector. 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 through capital accumulation, gradually absorbing surplus labor from the subsistence (informal) sector.

Figure 8.1 depicts the intersectoral allocation of labor in the Lewis model between rural (r) and modern (m) sectors. \( L \) represents the total labor force, MPL is the marginal productivity of labor, and \( W \) the real wage. Due to a "surplus" of labor, MPL\(_r\) is very low, with the modern sector consequently facing a perfectly elastic supply of labor. For reasons not specified in Lewis (1954), however, \( W_m \) is set exogenously well above the subsistence level \( W_r \). Initially, as the modern sector invests, raising MPL\(_m\), its employment expands, for example, from \( L_1 \) to \( L_2 \), absorbing labor from the traditional sector without raising \( W_r \). Eventually, the absorption of labor in the modern sector reaches \( L_n \), 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 the a Cobb–Douglas function (superscript \( m \) suppressed), \( Q = F(A, K, L) = AK^{a}L^{1-a} \), where \( A \) is technology, \( K \) is capital, and \( L \) is labor. Labor market equilibrium implies

\[
\frac{\dot{L}}{L} = \frac{\dot{A} + \alpha K - \dot{W}}{\alpha}.
\]

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

8.4.2 Urban unemployment and informal employment

Harris and Todaro (1970) (HT) elaborated on Lewis's dualistic labor market to include large-scale urban unemployment and underemployment, making migration endogenous. Surplus rural labor migrates to the higher-paid urban (modern) sector as long as the expected urban wage is higher than the rural wage. Equilibrium occurs when expected wages are equalized through adjustments in unemployment. That is, rural–urban migration
The Lewis model of labor market dualism continues until unemployment rises such that the probability of finding a high-paying job falls enough to equalize expected urban and rural wages.

Figure 8.2 depicts the HT model. HH represents a rectangular hyperbola on which the rural equilibrium wage and employment level lie, for a given modern sector wage and employment level. 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.

Fields (1975, 1990) presented a further important extension of the HT model, distinguishing unemployment and informal employment. The economy's labor force is now composed of four groups: workers in the urban modern sector; workers in the urban informal sector; the urban unemployed; and subsistence agriculture. In Fields' model, taking a low-paying urban informal job facilitates searching for a modern-sector job relative to remaining in the countryside, although unemployed workers face even lower search costs. Fields' (1975) framework implies that urban informal earnings are below rural incomes, although superior to incomes of the unemployed. In reality, urban informal incomes are higher than in agriculture (Fox and Gaal 2008), but real incomes of the urban informal sector could still be lower, considering the higher pecuniary and non-pecuniary costs of urban living relative to village life.
The Harris-Todaro Model

Both the Lewis and HT models assume but do not explain the reasons for high and sticky modern sector wages. These high wages could be due to minimum wages, unions, or efficiency wage considerations. The labor turnover model (Stiglitz 1974) proposes that firms pay higher wages to reduce quit rates. Alternatively, the biological efficiency wage model (Stiglitz 1976) assumes that firms pay higher wages so that workers have enough nutrition to work productively and avoid illness.

The HT model and Fields extension show how surplus labor is manifested in open unemployment and urban informal employment, in addition to subsistence agriculture. The central underlying problem giving rise to dualism, however, remains the scarcity of relatively high-paying modern sector jobs, as stressed by Lewis (1954).

8.4.3 The roles of globalization and modernization of the informal sector

Two important extensions to the Lewis perspective are relevant to contemporary Africa: (i) the role of globalization in accelerating structural transformation, and (ii) modernization of informal practices, especially in agriculture, through technology transfer.

8.4.3.1 Globalization

In the original Lewis (1954) model, the speed of economic development depends on domestic capital investment and technological change in the modern sector. Fei and Ranis (1964)
and others extended the Lewis model by refining the intersectoral linkages and the role of agriculture, while still assuming a closed economy. Contemporary globalization requires some important amendments through two channels: (i) Foreign capital, particularly foreign direct investment (FDI), provides an alternative to domestic savings and technological change. Moreover, FDI provides higher-paying jobs, increased competition, more training, and knowledge spillovers (Javorcik 2012). (ii) Outsourcing of labor-intensive manufactured products such as apparel by global supply chains (e.g. Gereffi 1999) also raises the demand for labor in developing countries. Murphy et al. (1989) is in the spirit of Lewis (1954), allowing for exports but with costly access to foreign markets. Thus, the central problem becomes alleviating bottlenecks to labor-intensive exports. Golub, Jones, and Kierzkowki (2007) point to the importance of domestic “service links”, that is, infrastructure and public services, in enabling developing countries to participate in the international fragmentation of production. Viewed from this perspective, accelerating growth of the modern sector requires improvement of the business climate in order to attract FDI and other “footloose” inputs that are critical to global competitiveness in manufacturing.

8.4.3.2 Modernization of the urban informal sector and agriculture

Lewis (1954) focused on shifting out modern sector labor demand but another possibility is to raise productivity in agriculture and the informal sector, shifting the demand for labor in the rural sector. Lewis recognized that the distinction between traditional and modern activities did not coincide with rural and urban, as shown by the quote above. Much attention now focuses on raising productivity of the urban informal sector (e.g. Fox and Sohnesen 2012) but agriculture may be more promising. The products of the urban informal sector are predominantly non-tradable services or artisanal manufacturing, with minimal exporting. Exports of traditional and non-traditional agricultural cash crops, on the other hand, are a viable African alternative to manufacturing for labor-intensive export-led growth (Golub, O’Connell, and Du 2008; Brenton, Newfarmer, and Walkenhorst 2009). This issue is discussed in more detail in the next section.

8.5 Expanding Employment through Labor-intensive Non-traditional Exports in Africa

Export-led growth is often identified with manufacturing, based on East Asia’s and to a lesser extent Latin America’s successes. Collier (2008) is pessimistic about Africa’s ability to compete with Asian manufacturers, given their head start and competitive advantages. Dinh et al. (2012) argue that Africa can compete in some light manufacturing industries, but that weaknesses in the business climate must be remedied.

Alternates to manufacturing for labor-intensive exports are available. Africa has promising export industries in tourism, fishing and especially agriculture, including horticulture (fruits, vegetables, and cut flowers) and perhaps most significantly, traditional cash crops.
Agricultural exports share many of the features of manufacturing, both in terms of their potential to spur growth and employment, and the institutional constraints they face in achieving this potential. Several critical aspects of manufacturing exports promoting development and poverty reduction apply to traditional and non-traditional agriculture: (i) high labor-intensity, (ii) possibilities for technological upgrading and consequently raising producer incomes, (iii) access to state-of-the-art foreign technology through FDI and outsourcing, and (iv) the necessity of attaining international competitiveness, and thus (v) the critical roles of low-cost labor and a favorable climate for investment. For agriculture, especially, sanitary and phyto-sanitary norms in developed country markets are a major hurdle for successful exporting (Golub and McManus 2008) analogous to the demanding specifications of global buyers of apparel.

The augmented Lewis model in section 4 suggests two main institutional impediments to labor-intensive exports (i) wages are set too high in the modern sector, and (ii) the adverse business climate deters investment and technological upgrading in labor-intensive tradable industries, both in manufacturing and agriculture.

8.5.1 High labor costs

Minimum wages, unions, and labor market restrictions can raise urban labor costs, reducing employment in the formal sector as firms adopt more capital-intensive techniques or exit the country (equation 1 in section 4.1). As shown in section 2.2, manufacturing wages in Africa are very high relative to per capita income and informal sector incomes. This is partly due to relatively high minimum wages and labor market restrictions. Table 8.2 shows that minimum wages relative to GDP are much higher in most low-income African countries than in other regions, particularly East Asia. This is not the case for the middle-income African countries, although South Africa has rather high manufacturing wages, likely due in part to strong unions rather than minimum wages. Minimum wages may therefore be part of the explanation for high manufacturing wages relative to GDP in low-income African countries.

Some studies (e.g. Rama 2000; Fox and Oviedo 2013) have found that minimum wages and labor market restrictions are not a major constraint in Africa, unlike in other regions, despite often highly restrictive statutory provisions, perhaps because of lack of enforcement or because other constraints are more important. This benign perspective on labor market regulations may be overstated, for several reasons. First, labor market conflicts may be of lesser importance than infrastructure or corruption, but could still matter. Second, domestic firms, particularly in the informal sector, may be able to routinely disregard labor market statutes. Formal firms, especially foreign investors, however, may feel compelled to abide by local laws, due to lesser recourse to authority in the host country as well as pressures from labor-rights activists at home, and thus may simply eschew investing in countries with such laws even if they are not much enforced.

Both wages and productivity in manufacturing are high in Africa relative to per capita GDP. Unit labor costs, the ratio of wages to productivity, also tend to be higher in Africa than in other developing regions, adversely affecting international competitiveness (Mbaye and Golub 2002; Edwards and Golub 2004; Clarke 2011; Gelb, Meyer and Ramachandran 2013). One possible way of improving competitiveness, adopted in East Asia, is to promote
exchange-rate undervaluation, but this is precluded in countries in monetary unions, as in francophone West and Central Africa.

### 8.5.2 Business climate for investment

More importantly than labor market restrictions, the African business climate remains very problematic in some areas, notably poor infrastructure and public services and burdensome restrictions and regulations (Ramachandran, Gelb, and Shah 2009; Eifert, Gelb, and Ramachandran 2008). Deficiencies in infrastructure, red tape, and corruption raise indirect costs of production, input sourcing, and distribution substantially. Low-income African countries mostly rank at the bottom of standard measures of competitiveness and the business climate, such as the World Bank's Doing Business indexes.

As Lin and Monga (2010), Rodrik (2008), Golub, Berrnhardt, and Liu (2011), UNCTAD (2010), and others have stressed the private sector is the engine of job creation, but economic development requires a “developmental state” that assists the private sector to overcome market failures, such as external economies of scale, coordination failures, and knowledge externalities. Yet in African countries state failures are often even worse than market failures. These state failures take the form of both errors of omission (failure to invest in infrastructure and provide public services) and commission (excessive regulation and predation on private businesses) (Krueger 1990).

These institutional dysfunctions raise transactions costs in all areas of economic activity, but are particularly damaging for export-oriented industries where quality control and timeliness of delivery are paramount. Collier (1998) and Golub, Jones, and Kierzkowski (2007) attribute Africa’s failure to attract investment in labor-intensive manufacturing to state failures raising transactions costs. It is less well known that traditional cash crop production is also undermined by severe disorganization resulting from state failures.

Agricultural primary products such as cotton, coffee, cocoa, and groundnuts still dominate exports of many African countries, affecting the livelihoods of very large numbers of people, often smallholder farmers. These products involve complex value chains, including research and extension, provision of credit and inputs (seeds and fertilizer), storage, collection of the crop, transport, processing (e.g. shelling peanuts or ginning cotton), and marketing, in addition to planting and harvesting. Particularly for smallholders, arrangements for provision of credit and repayment of loans are major issues. Consequently, as Poulton et al. (2004) and Tschirley et al. (2009) have documented for cotton, there is a fundamental trade-off between competition and coordination in the organization of the value chain.

Exports of specialty coffees, for example, in Rwanda, illustrate the potential gains from exports of agricultural commodities through technological transfer and product upgrading (Golub, O’Connell, and Du 2008). But more often, the same institutional obstacles to manufacturing competitiveness block progress in agriculture, as illustrated by the cases of cotton in Benin and groundnuts in The Gambia and Senegal. As in other countries, these cash crops were controlled by state marketing boards in the first decades of independence and privatized in the 1990s and 2000s. The integrated state-controlled system was evidently flawed, but reforms have had mixed success. Opening the market has often entailed opportunistic behavior rather than open competition. Provision of public goods has suffered.
8.5.3 Cotton in Benin

With assistance from the World Bank, in the 1990s Benin phased in a complex system of private organization, involving limited competition. The reforms succeeded in spurring the entry of domestic entrepreneurs. Some of these entrepreneurs have proved effective, while others have been incompetent and opportunistic, relying on political connections to remain in business. The government failed to enforce the rules and sanction cheaters. Instead, it sometimes intervened in support of special interests and disrupted the functioning of the system. Benin suffers in some respects from the worst of both worlds: limited coordination, due to the weakness of the institutions in enforcing compliance, and limited competition, resulting in depressed production and incomes. The problem is not so much the design of the reforms but the government's inability to implement them effectively (Golub 2009).

8.5.4 Groundnuts in Senegal/The Gambia

Groundnuts remain the two countries' dominant cash crop (Golub and Mbaye 2002; Mbaye 2005; Integrated Framework 2007). Groundnuts can be sold in either edible form or processed into peanut oil and oil-cake. Contrary to the view that developing countries should strive for greater processing rather than selling products in raw form, edible groundnuts can fetch much higher prices in the European market than groundnuts pressed into oil. However, concerns about aflatoxins and pesticide residues have ratcheted up the quality standards in the edibles market, with higher qualities commanding increasing premiums. Processes for controlling aflatoxins are well-known and not difficult to implement in purely technical terms, requiring attention to moisture control and rapid shipment, in turn demanding investment in storage and transport infrastructure, and training of personnel in proper handling (Mbaye 2005). Senegal and The Gambia have made little or no progress in these areas, so Senegalese and Gambian edible groundnuts have very elevated aflatoxin levels and have thus largely been shut out of the European market.

8.6 Conclusions

African economies have picked up but structural transformation remains limited. In this setting, employment opportunities are barely keeping up with rapidly growing labor forces. In low-income countries, this translates into large and sometimes growing underemployment rather than open unemployment, as people are simply too poor not to work. The vast majority of the work force remains in subsistence agriculture and, increasingly, the urban

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7 Aflatoxins are a known cancer-causing substance that contaminates groundnuts when handling and storage are slow and the crop is exposed to inappropriate moisture and temperature.

8 Gambian raw groundnuts have been sold at discounted prices for birdseed, but even this limited market is threatened as animal rights activists protest against exposure of birds to high levels of aflatoxins!
informal sector, with very low and uncertain incomes and no access to social insurance programs. Public sector jobs have dwindled since the era of structural adjustment in the 1980s and 1990s, and private formal sector employment growth has been too small and started from too low a base to make a significant dent in underemployment. With its rapidly growing populations, small enclaves of relatively well-paying modern sectors, and vast informal economies, Africa resembles the situation described by Arthur Lewis (1954) as "unlimited supply of labor" more so today than at the time Lewis presented his classic analysis.

Lewis's (1954) depiction of development as the absorption of underemployed labor from subsistence activities into modern industry is still valid, with two amendments. First, developing countries can harness the forces of globalization to generate unprecedentedly rapid growth through labor-intensive exports, as successive waves of East Asian countries have been demonstrating for 50 years. Second, exports of traditional and non-traditional agricultural crops, tourism, and fishing are viable alternatives to manufacturing in Africa. Africa has opportunities to benefit from globalization, in manufacturing but even more in agriculture. When the government fails to provide public goods and harasses formal-sector firms, domestic enterprises will shut down or become informal, and foreign investors will look elsewhere. The work force pays the price in the form of fewer employment opportunities and lower incomes. Many African countries have made considerable progress in restoring macroeconomic stability and improving the business environment, but further efforts are needed to attain global competitiveness in labor-intensive industries to spur sustained employment growth and rising earnings.

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