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Youth employment in sub-Saharan Africa

Progress and prospects

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Abstract

As the world's youngest region, improving employment opportunities, especially for youth, is important in sub-Saharan Africa for several reasons, including the fact that most people work their way out of poverty. This paper reviews the state of employment outcomes today, trends in the past 10 years, and the opportunities and challenges for employment policy in sub-Saharan Africa in the post-COVID-19 period. It identifies what is known about the drivers of these outcomes, and the consequences for Africa's youth.

The good news is that, as incomes and level of economic development and transformation improve in sub-Saharan Africa, youth and adult employment outcomes improve. In other words, when countries achieve balanced economic growth and transformation, better employment opportunities follow. SSA outcomes are similar to those found in developing countries in other regions, after controlling for income level; SSA countries are mostly not behind the rest of the world. Employment outcomes tend to be worse in lower-middle-income resource-rich countries because income improvements do not correlate well with development outcomes—either in the labor market or outside of it.

These results show that the youth employment policy agenda in sub-Saharan Africa is, first and foremost, an economic transformation agenda, including raising within-sector productivity in lower productivity sectors such as agriculture and expanding output and employment in higher productivity sectors. These changes will widen economic opportunity choice sets for youth. The "industries without smokestacks" (IWOSS) agenda is one approach to achieving this outcome.

Nonetheless, youth entering labor market today and over the next decade will face a set of constrained choices. Current levels of economic development and transformation will not provide enough wage employment opportunities to match the high rate of labor force growth, which is driven by past and current high fertility. As a result, informal will be normal for several decades. The African employment agenda needs to include measures to increase productivity and earnings in the informal economy. Improving educational quality to build stronger cognitive and socio-emotional skills is also part of the agenda, as is reducing the obstacles women face in the world of work, including amending or abolishing discriminatory laws and enacting policies and programs to reduce or eliminate marriage and childbirth under the age of 18.

1. Introduction

Throughout the 21st century, as economies have been buffeted by volatile economic cycles—including the recent COVID-19 pandemic—and increasingly strong technological winds of change, enhancing employment opportunities has taken an even stronger position on center stage in development policy discussions. The reasons are obvious—billions of people in the developing world are trying to exit poverty through better jobs, providing higher incomes for themselves and their families. The quality of employment opportunities is important for the employed, for those who wish to work but can't find work or lack access to opportunities, and for others who depend upon the income employment provides. Improvements in job opportunities are strong signals of the quality and strength of economic transformation and development.

As the world's youngest region, improving employment opportunities is especially important in sub-Saharan Africa (SSA),[1] for several reasons. First, the 43 percent of the population under the age of 15 mostly depends on the incomes that their parents earn for their own survival, growth, and personal development. At the same time, 41 percent of the population lives in poverty, and the children who grow up in these households risk permanent physical and social damage and even death owing to malnutrition and childhood illness, and lack of quality education and other opportunities to build human capital (Beegle & Christiaensen, 2019). Second, owing to past high fertility, SSA has the fastest-growing labor force in the world, and every year many young people struggle to enter employment and find a livelihood. Third, sustained economic growth, needed to finance the investments to build more resilient economies and societies, requires steady increases in output per person working (labor productivity). This outcome means producing and selling more, in part by employing more people more productively and taking advantage of new opportunities emerging in a globalizing world, without succumbing to the risks to sustained growth that such a strategy involves. For all these reasons, SSA leaders and policymakers have set enhancing employment opportunities as one main objective of their development strategies.

Owing to the high share of youth in the working-age population compared with other regions, much of the employment discussion in SSA has centered on youth's opportunities and challenges, and how to address these. Youth is a time of transition from dependent childhood to independent adulthood, and economic independence—often achieved through employment—is an important aspect of this transition. However, youth's opportunities depend on the overall opportunities in the economy, which depend on the extent of economic transformation and development. Richer countries offer better jobs, and countries get rich by developing productive employment opportunities—the two processes are inextricably linked. For this reason, an analysis of youth employment opportunities and challenges is connected to overall employment challenges stemming from the pace and structure of economic transformation.

Better jobs are generally found in modern, productive enterprises, and one characteristic of developing countries is a lack of these modern enterprises relative to the supply of labor coming from the population. For this reason, a focus of employment policies in developing countries needs to be on encouraging more firms to be created and to grow, expanding private sector wage employment, especially in more productive sectors. This happens fastest when new and existing firms create the goods and services they sell using a lot of labor (labor-intensive production processes). But employment policies cannot stop there. A stylized fact of development today is that until countries reach at least upper-middle-income status, the majority of jobs will be found in small-scale household farms and firms. SSA is no exception, so a key employment challenge for policymakers is how to raise

1 Throughout this paper, "SSA" and Africa are used synonymously.

incomes in the informal sector even as they work to create the conditions in the formal economy that allow the share of employment in the informal sector to decline.

Africa was making progress on these issues and many countries were achieving better employment outcomes before the onset of the global pandemic with the ensuing economic, social, and health consequences for the population. While only the richer and more developed countries have suffered an increase in unemployment (for reasons elaborated in section 4 below), most countries have seen a fall in labor incomes—the average for SSA as a whole in 2020 is estimated at about 10 percent. This is a large hit for households already at or below the poverty line to absorb.

The IMF and others are projecting a growth recovery in 2021, although not to the extent that the 2020 losses are regained (IMF, 2021), which will make employment policy an even more salient issue in the years ahead. Developing solutions requires knowing the shape of the problem and the mechanisms and external forces that cause changes over time. Until recently, getting a clear picture of the employment opportunities and challenges in SSA has not been easy, as the data simply were not available. Over the past decade, countries have produced and published more data on who is working and what they are doing more frequently, and data quality has improved. Yet creating aggregate estimates across the subcontinent and analyzing how patterns have changed over time remains a challenge owing to frequent changes in questionnaires and variable definitions leading to lack of comparability over time within one country, as well as a lack of cross-country comparability.

The purpose of this paper is to illuminate the opportunities and challenges for employment policy in SSA by analyzing recent trends in labor supply, labor demand, and labor market and employment outcomes, and identifying what is known about the drivers of these outcomes, and the consequences for Africa's youth. This is achieved by: (i) aggregating labor market and employment data sensibly across SSA countries to provide an updated snapshot of the youth employment challenge today (pre-pandemic); (ii) highlighting where the region has made progress in addressing employment challenges, and benchmarking this progress against the progress of other developing regions; (iii) summarizing recent literature as well as new data to drill down on key dimensions of the employment challenge, exploring questions such as how youth make the transition into employment, why informality persists, and which types of countries are best positioned to improve employment opportunities; and (iv) based on this analysis, offering a menu of policy options to help countries develop better opportunities for youth in the labor force now and those expected in the future.

Themes explored include:

- Labor supply: the demographics of today's working-age population, who is and is not working, and why;
- Labor demand and employment outcomes: the complex structure of employment and livelihoods and how it changes with country income growth;
- The relationship between mineral resources and employment structure;
- Why labor markets don't clear—who is unemployed, who is underemployed, and what are the skill-mismatch problems;
- What do youth want out of the labor market, and how do they go about getting it; and
- Employment and development policy implications of above findings.

This review finds that youth entering labor market, seeking employment, face a set of constrained choices. The constraints include the level of economic development and transformation—which creates better employment opportunities for all—and the rate of labor force growth—which limits the share of youth that can get those opportunities.

The good news is that, as incomes and level of economic development and transformation improve in SSA, youth and adult employment outcomes improve. In other words, when countries achieve

balanced economic growth and transformation, better employment opportunities follow. SSA outcomes are similar to those found in developing countries in other regions, after controlling for income level; SSA countries are mostly not behind the rest of the world. Lower-middle-income countries (LMICs) in SSA have more wage employment, less underemployment, and less employment in agriculture (a sector characterized by underemployment, low earnings, and income risk). Youth unemployment is an exception, as it is higher in SSA LMICs than in low-income countries (LICs). But, once again, this SSA result is consistent with international experience as youth unemployment tends to rise with a country's income level until countries reach upper-income status. While there is heterogeneity among SSA countries, SSA outcomes are consistent with the overall trend in the world that youth unemployment rises with income until countries become rich, at which point it falls back. Employment outcomes tend to be worse in LMI resource-rich countries because income improvements do not correlate well with development outcomes—either in the labor market or outside of it.

The SSA labor force continues to grow rapidly—about 3 percent per annum, which poses economic development and labor absorption challenges that may not be fully appreciated by stakeholders. But the share of youth in the total labor force in SSA is falling, although there is significant heterogeneity across the continent. Participation of youth falls as income rises because youth spend more time in school—one reason why the share of youth in the labor force is falling in countries such as Kenya and Ghana. Nevertheless, SSA has the highest percentage of children under age 15 working, as well of youth under age 19, an outcome that compromises the skill development of the future labor force.

Africa has both an underskilling and overskilling problem. The poor quality of education systems means that years of education do not translate well into better employment outcomes, even in urban areas where the more educated labor force, especially youth, live and work. Unemployment is highest among those with the highest levels of education, and, once they enter the labor force, the well-educated are highly likely to report that their skills are not being used. This trend suggests that African countries, especially the LMICs, have created more skills than opportunities. This economic disequilibrium will not automatically be corrected by economic growth; new firms that use a combination of high-skilled and lower-skilled labor need to be created.

Young women in SSA face a number of gender-specific obstacles to better employment outcomes. Too many young women are married and have children before the age of 18, limiting educational attainment and the development of socio-emotional skills, as well as leading to worse health outcomes during pregnancy. Moreover, at the macroeconomic level, early pregnancy contributes to higher fertility. Once they enter the labor force, a range of social factors impede women's ability to earn income, including lack of secure access to land and other assets, credit, as well as occupational segregation and workplace harassment norms that impede equal pay.

African youth are optimistic about their future, despite the struggles they face today in entering the labor force—which for youth entering in 2020-2022 will be compounded by the COVID-19-induced recession. Finding and developing a livelihood could be made easier through pre-employment preparation of youth, either inside of school or in parallel in the community, which would include developing key socioemotional employability skills, as well as providing information about opportunities and their expected job content and income.

The results show that the employment policy agenda in SSA is first and foremost an economic transformation agenda, including raising within-sector productivity in lower productivity sectors such as agriculture and expanding output and employment in higher productivity sectors. Supporting firm entry and growth—both of which are low at present—should be a priority. These changes will widen economic opportunity choice sets for youth. The IWOSS agenda is one approach to achieving this outcome.

Even with the best economic policies, owing to high labor force growth, informal will be normal for several decades in SSA. The SSA employment agenda in LIC and LMICs needs to tackle productivity

issues in this sector, both on and off the farm and in urban areas. Improving access to digital services has demonstrated its value and should be a high priority, for the most part through investments and policies to lower ICT service costs.

The employment policy agenda should also include tackling medium- and long-term challenges, including SSA LICs and LMICs poor learning outcomes, which limit the contribution of education to incomes and economic transformation. Another challenge is SSA's stubbornly high fertility. The two challenges are related. Projected slow fertility decline will cause labor force growth to continue at a high level, which tends to reduce employment transformation. But it will also limit the capacity for improved educational outcomes, given the need for constant growth in service units to serve a growing population of children.

COVID-19 is posing immediate challenges for SSA countries and governments. However, it does not appear to be changing the direction of past outcome trends in SSA, only halting progress. SSA's medium-term challenges remain.

2. Data and classifications

The data for the analysis is from SSA country household surveys (see Appendix A for a list of countries, country classification, and surveys used).[2] These surveys are supplemented by data from the International Labor Organization (ILO), including modeled estimates to analyze trends as many SSA countries have not regularly conducted surveys in the past.

Data for over 40 countries are aggregated, weighted, and presented by income group:[3]

- Low-income countries (LIC)
- Lower-middle-income countries not dependent on mineral resource export earnings (LMIC)
- Lower-middle-income countries dependent on mineral resource income (resource-rich)[4] (LMICRR)
- Upper-middle-income countries (UMIC)

Presenting data by income groups shows how employment behavior and outcomes change as countries get richer. However, how a country gets rich matters a lot for the development of employment opportunities. In particular, an abundance of mineral wealth, especially in a less-developed country, is associated with a larger state, a less developed and less diversified domestic private sector, and overall worse development outcomes compared with countries at a similar level of income (Frankel, 2012). In terms of employment outcomes, in low-income countries, the patterns are quite similar, as the overall poverty and low level of economic development are about the same; the mineral wealth has not produced enough domestic income to matter, so we do not show them as a separate group. But the data for LMIC countries does show different patterns for the resource-rich (RR) group

2 In some countries, older surveys have been used instead of recent ones to ensure that employment is measured consistently. See Appendix B for a discussion on the consistent measurement of employment and labor force participation.
3 World Bank data is used for income group classification. GNI per capita is below $1,026 in low-income countries, between $1,026 and $3,995 in lower-middle income countries, $3,996 and $12,375 in upper-middle countries.
4 LMIC countries are considered resource rich if minerals accounted for at least 50 percent of goods exports during 2006-2010. Export data comes from the Atlas of Economic Complexity initiative at Harvard University. Natural resource export share (non-renewable resources such as oil, gas, coal and other minerals but not agricultural commodities) was used because these data are more widely available than resource rents as a share of public expenditures or as a share of GDP. Following (Lashitew et al., 2020), the cut-off for resource rich is 50 percent; countries with mineral export share below this level exhibit less tendency toward the "resource curse" syndromes—lower GDP growth, Dutch disease, poor business environment and less developed economic institutions, and lower human capital. The period 2006-2010 was used so that the resource rich syndrome had time to unfold and infect employment outcomes.

compared with the others. SSA has few countries in the UMIC group, and several are RR, including South Africa, which, because of its larger population essentially determines the outcomes in this group.

While everyone's employment outcomes depend on the opportunities presented in the economy, youth face particular challenges in finding and seizing economic opportunities. One challenge is the continuing need for skill acquisition. Neurological evidence shows that youths' brains are still developing in areas related to emotional regulation and self-control (Heckman & Kautz, 2013). Employment search skills and the socio-emotional "employability" skills valued by employers are usually learned through experience (tacit learning), not through formal skill development (although certain types of pedagogy are more effective at forming these skills than others; see discussion in World Bank, 2018). It is widely accepted that experience on the job is valued and rewarded, both as a signal that these employability skills have been acquired as well as reflecting real skill gains acquired through work. Youth who have acquired socio-emotional skills may have trouble signaling this result (Carranza et al., 2020).

A second challenge is the need for many youth to create their own employment, owing to the lack of wage jobs on offer in the less-developed private sectors of low- and lower-middle-income countries. In the agricultural sector, this may mean acquiring land, inputs, and tools. In the nonagricultural sector, it may mean acquiring inventory to sell, tools to provide services such as hairdressing or repair, or raw materials needed to produce home-made goods such as food or craft furniture. In all cases, savings are needed, either from one's family and network, or from earnings acquired by working for someone else as a wage worker or dependent contractor, or a combination. The need to meet this challenge may cause youth to experience spells of unemployment or underemployment combined with shorter periods of employment than adults (Bridges et al., 2016).

To highlight these differences, outcomes for youth are presented separately from those for adults where possible. In this paper youth are defined as individuals aged 15-24, which is the United Nations (U.N.) definition. Youth is both a social and demographic construct, however, and "youth" as a target age group is defined differently in different countries. The meaning of youth also differs by gender, as poor young women may already be independent from their birth families, married, and having children in the youngest age range of youth (15-18), even while males at the same age still live with their parents (Filmer & Fox, 2014). Males as well as females from more fortunate backgrounds and in richer countries may still be in school in their early 20s and dependent on their parents.

Recognizing that these challenges do not magically end when youth reach the age of 25, survey data nonetheless suggest that most youth in SSA are economically independent by age 25 (Mason et al., 2017; Filmer & Fox, 2014), and some are even supporting younger siblings still living with their parents. Thus, for the most part, the age cutoff of 25 serves the purposes of this paper.

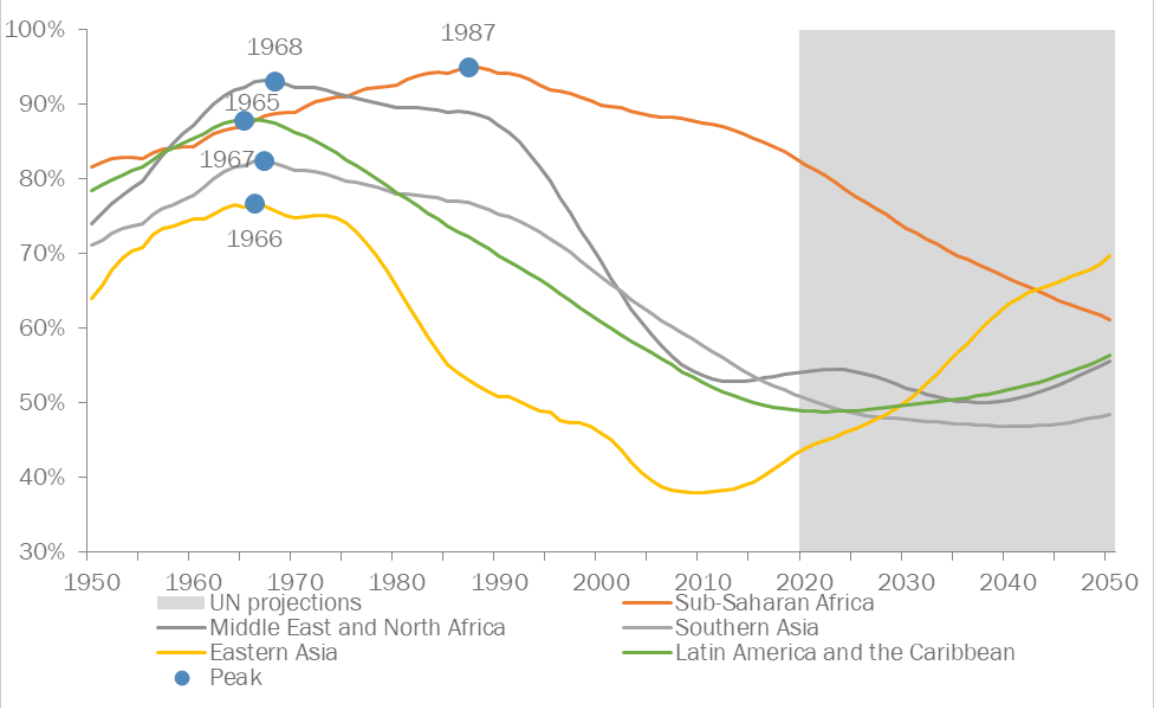
3. Demographics of labor supply and employment

Africa's demographics determine the potential labor supply today and for at least the next twenty years. Behavioral responses of Africa's working-age population to their economic opportunities (such as demand for labor given education), needs (such as household consumption requirements vs. household chores and care), and social circumstances (such as behavioral norms around women's employment)—determine who actually works and why. Although a growing (and employed) labor force contributes to economic growth as each worker adds value in the economy, rapid labor force growth puts downward pressure on wages as the economy struggles to absorb the inflow. For this reason, the analysis starts with Africa's demographic trends.

The SSA working-age population (15-64) numbered 587 million in 2018, accounting for 54 percent of total regional population and about 14 percent of the world's total working-age population. Over the next two decades, the working age population will increase by about 20 million people per year. Owing to population aging in all other parts of the world, SSA's share of the working-age population is projected to rise over the next decades. While it is true that SSA is the world's youngest region, the working-age share of the population passed its lowest point in 1987 (at about 50 percent) and has been rising ever since while the dependency ratio reached peak at the same time (Figure 1). Importantly, this change has been slower than in other parts of the world, owing to slower fertility decline (Mason et al., 2017), and the peak came significantly later than other regions, all of which are now aging rapidly except South Asia and the Middle East. A falling dependency ratio brings a potential demographic dividend; however, the size of the dividend depends on the rate of change in the dependency ratio. SSA's ratio peaked at a very high point, and is falling slowly (similar to the Middle East), so prospects for an Africa-wide dividend appear limited. However, some countries within SSA that have been able to reduce dependency more rapidly maybe able to reap a small dividend.

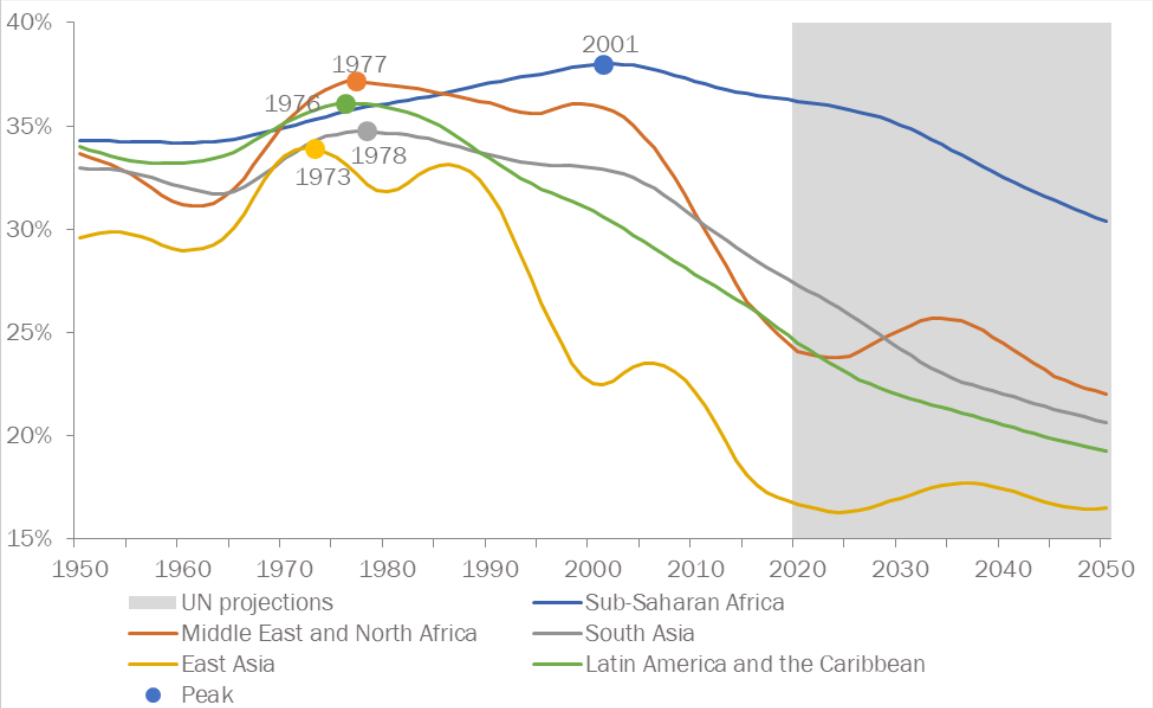
Not surprisingly, Africa's labor force is also the youngest in the world, but the labor force is gradually aging as well. Youth's share of the working-age population peaked at 38 percent in 2001 and has been declining ever since. Now, owing to the fact that youth participate less than before because they are more likely to be in school, or, if female, may be already out of the labor force caring for young children, in addition to longer life expectancy enabling people over age 50 to still work, the youth share of the employed population is even lower, at 24 percent, and this share will continue to decline. If Africa's slow decline in fertility relative to improvements in life expectancy persists, the youth share of the labor force is expected to decline more slowly in SSA than in other regions of the world, so most countries will continue to see many young people entering the labor force during the coming decades.

Figure 1: Dependency ratio, actual and projected by region



Note: Working-age population is estimated population ages 15-64; dependency ratio is population out of working age over working-age population.
Source: United Nations World Population prospects 2019 (Medium Variant).

Figure 2: Youth share of working-age population, actual and projected by region

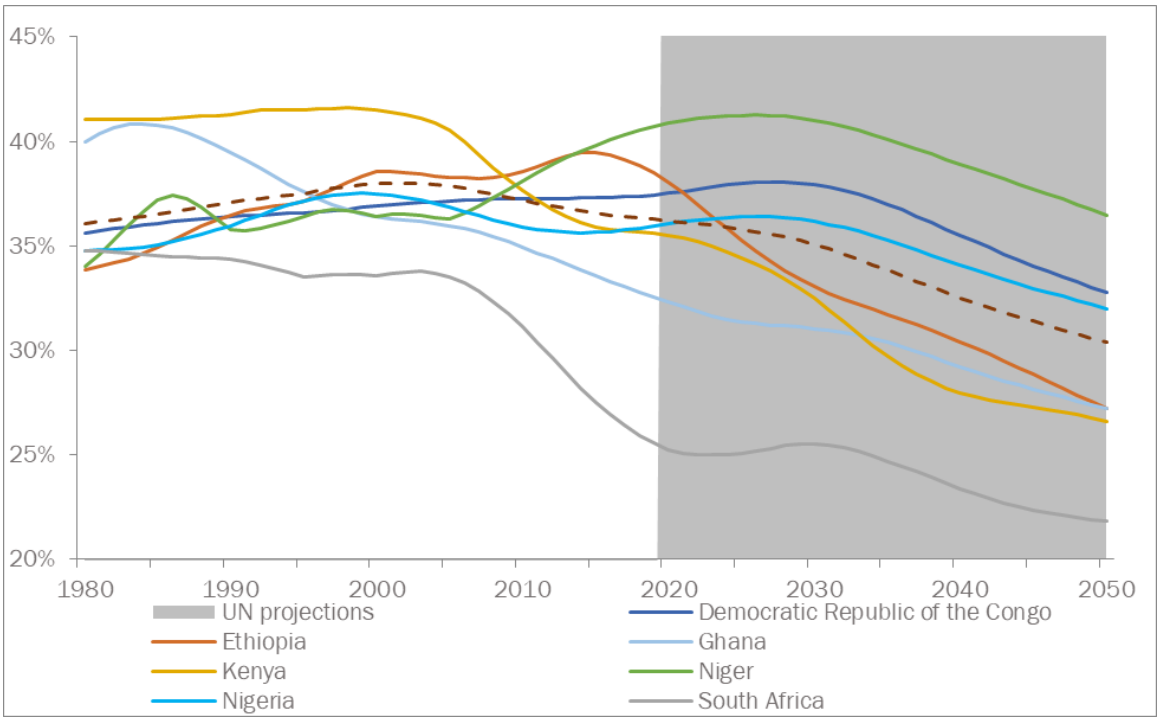


Note: Youth is the estimated population ages 15-24. Working-age population is estimated population of ages 15-64.
Source: United Nations World Population prospects 2019 (Medium Variant)

The behavior of SSA households suggest that current trends will persist. For example, child marriage and pregnancy in SSA is the highest of any region in the world; 10 percent of young women in Africa today have a child before the age of 18; in South Asia that share is 2.5 percent (UNICEF, 2020). Having a child before the age of 18 has multiple negative consequences: It puts a woman at increased risk for complications and even death; pregnant females are often forced to drop out of school; it raises overall fertility, which can put the development of all children in the house at risk; and it raises total national fertility, which can have negative macro-level consequences. Controlling for the factors that normally reduce fertility (household income, women's education, urbanization), Bongaarts (2017) found a unique and positive African fertility effect compared with countries in other regions of the world, which explains the slow decline projected in Figures 1 and 2 (above).

The sub-continental trends in Figures 1 and 2 hide substantial regional variation, reflecting heterogeneity in the demographic transition among SSA countries. Most African countries have raised life expectancy substantially over the last 30 years, such that Africa-wide life expectancy at birth is 60 years. Some countries, such as Rwanda, Ghana, Kenya, and Zimbabwe, have lowered total fertility substantially (to below four children per woman if she survives through her reproductive child-bearing years), through a combination of higher girls' educational attainment and increased availability of contraception. In other countries, such as Niger, the fertility rate has barely moved in the last 20 years, and is stuck at seven. In Nigeria, life expectancy is only 54 while fertility is 5.4. As a result, the youth share of the working-age population has not peaked in Niger, the Democratic Republic of the Congo (DRC), and Nigeria, while it is headed steadily down in Ethiopia, Ghana, and Kenya (Figure 3). As a result, the region-wide average sits between the growing youth population in Nigeria (with 200 million people) and DRC (with 86 million), and the falling youth population of Ethiopia (112 million) and Kenya (47 million). But only South Africa (RSA) has a youth share of the labor force near the level of South Asia or Latin America.

Figure 3: Youth share of the working-age population, selected countries



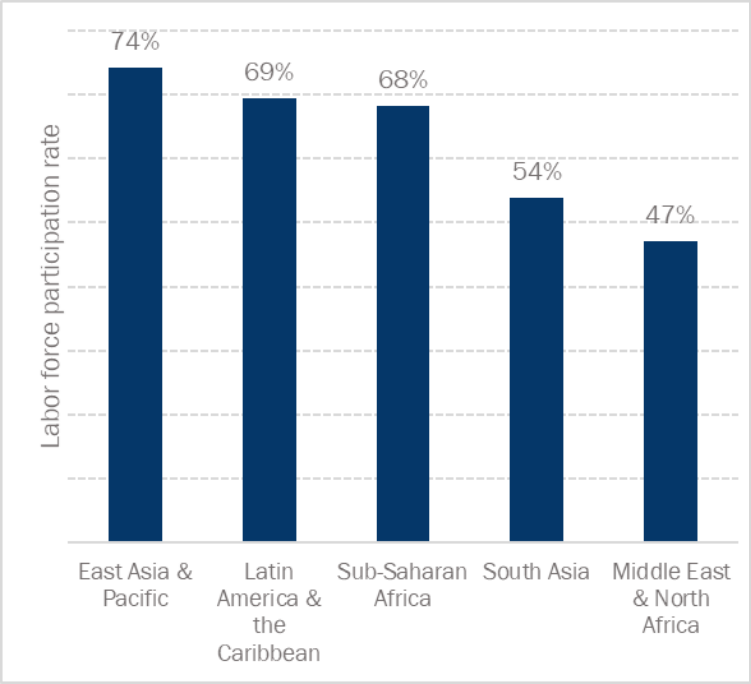
Note: Youth is the estimated population ages 15-24. Working-age population is estimated population of ages 15-64.
Source: United Nations World Population prospects 2019 (Medium Variant).

Labor force participation (LFP)—the difference between the working-age population and those who are out of the labor force (see Box 2)—is high in Africa, but consistent with trends observed in other regions, the rates decline with household income (Figures 4 and 5; Klasen et al., 2019). Most of the decline is in female labor force participation, for several reasons: (i) in low-income countries, women with young children are able to combine work with childcare but, as home-based activities such as farming and informal household businesses decline as a share of employment, women are more likely to withdraw from the labor force to care for children; and (ii) richer households can afford to have women participate less in peak child-bearing and -caring years (ages 20-45) (Figure 6). A strong negative effect of fertility on female labor force participation (FLFP) has been found in several studies, most recently in Bloom et al., (2009) for a large group of developing countries. This study found an 8-percentage point effect starting at age 20-24, with a cumulative 15 percentage point effect at ages 35-39. Nigeria, which dominates the resource-rich LMIC group, has higher fertility, controlling for income, which maybe one reason that the youth LFP rates are lower in the resource-rich group than other LMICs (see Figure 7, showing a higher proportion of young women not employed and not in school); another reason could be inconsistent data (see Appendix 2).[5]

Labor force participation also declines with income among youth, as secondary schooling becomes widely available, and households can afford to keep their children in school. By the time countries reach UMIC status, over 80 percent of youth age 15-19 are in school and not working, whereas in LICs,

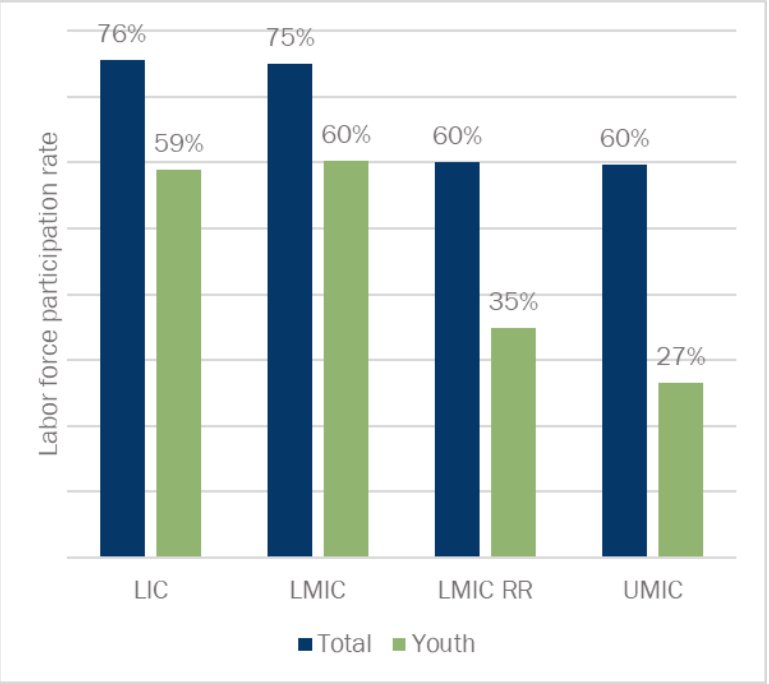
5 When measured using the standard 7-day recall, Nigerian youth LFP is quite low. When measured using a longer recall, as in LSMS-ISA surveys, participation rates are about 50 percent.

Figure 4: Labor force participation rate, by region



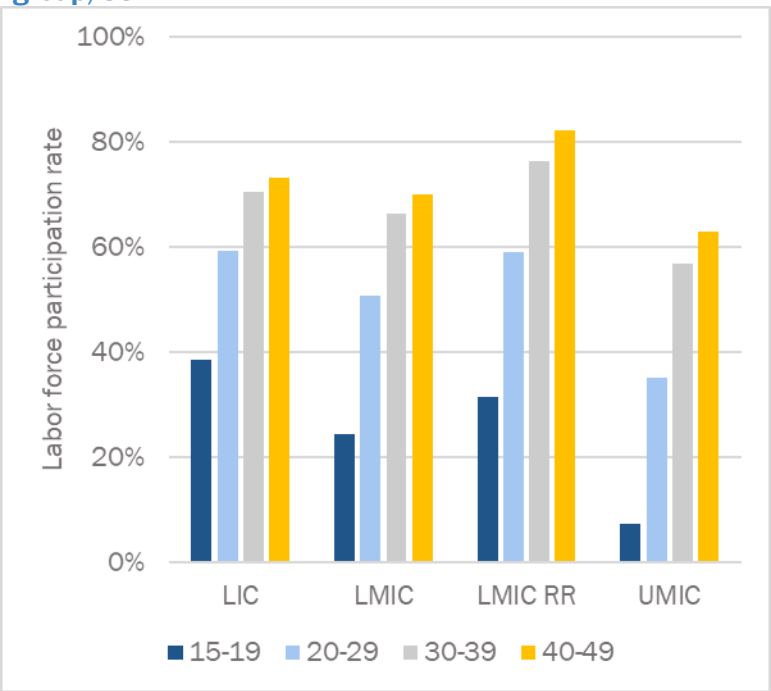
Note: Excludes high-income countries. Labor force weighted.
Source: Labor force participation rate—ILO Modelled estimates accessed via World Development Indicators.

Figure 5: Labor force participation rate, SSA



Note: Labor force weighted.
Source: See Appendix A.

Figure 6: Female labor force participation rate by age group, SSA



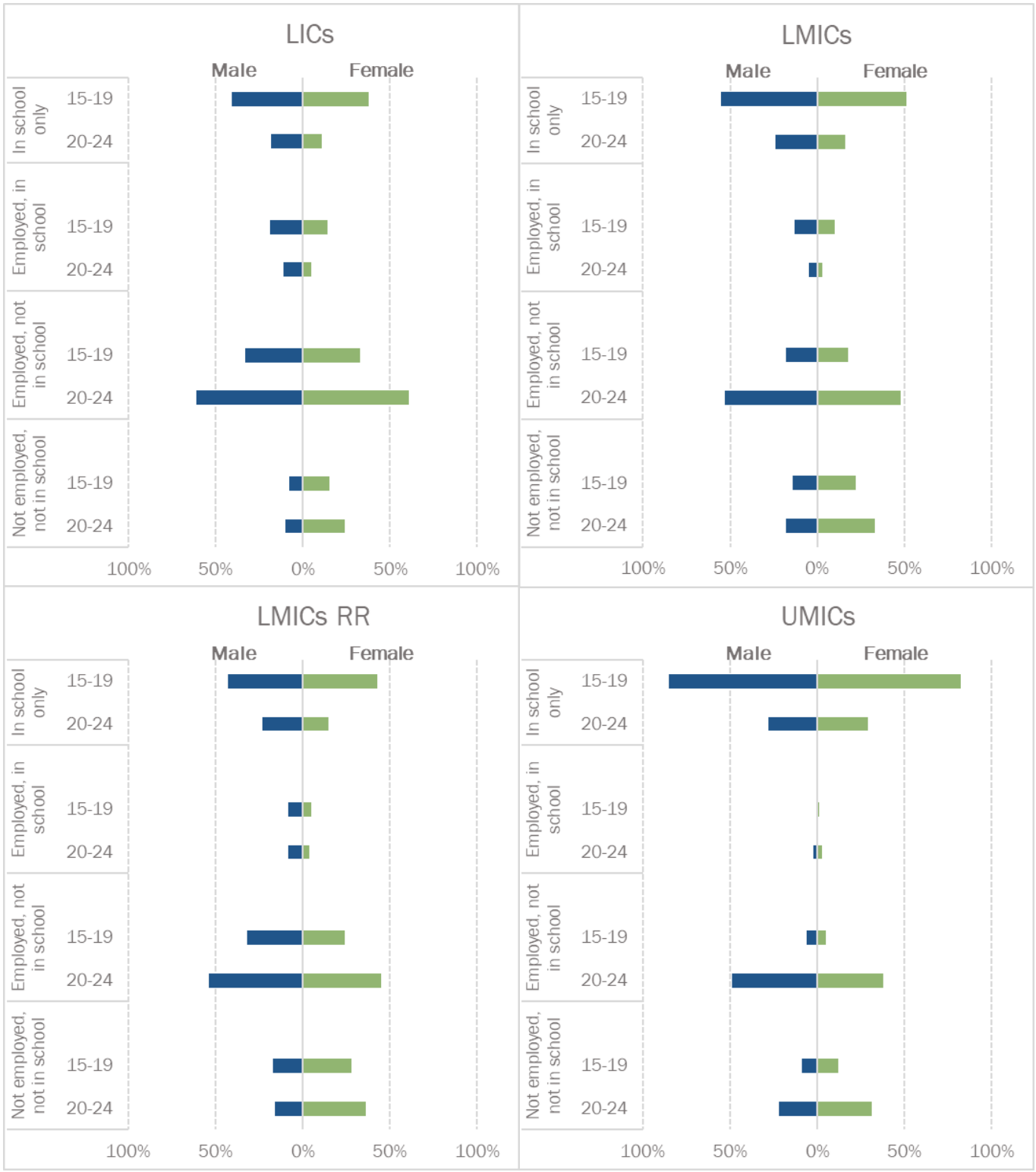
Note: Unweighted averages.
Source: USAID DHS Statcompiler.0

only about 40 percent are able to achieve this status, while another 14-20 percent are able to stay in school by working. Compared with other regions, African LICs and LMICs have a high percentage of youth in the 15-17 age range working during some part of the year, estimated by (Dolislager et al., 2020) at 57 percent (63 percent of males); compared with 30 percent in LAC and 20 percent in Asia.[6]

Fully one-third of youth aged 15-19 in African LICs have already dropped out of school and are working, although, in a few cases, youth may be working in order to get the money to go back to school. In all countries, as youth get older, they are more likely to work, although the share of women working lags men, especially in the higher-income group. In middle-income countries, about one-third of women age 20-24 are neither in school nor working (NEET—neither working nor in education or training). Although a recent Gallup poll found overwhelming support among men and women in SSA for women to have a paid job, the extent to which the large

6 In the other regions, most of the surveys analyzed in the study were from middle income countries (LMICs and UMICS).

Figure 7: Education and employment status of youth, SSA



Note: Population weighted average.
Source: Youth labor force participation rate by sex, age, and school attendance status—ILOSTAT database.

share of young women who are NEET represents a choice to care for children or a lack of support systems for women who wish to combine working with caring for children and household chores is unclear (Ray & Esipova, 2017).

Working children under the age of 15 is both a serious economic and social problem and, at the same time, an important contribution to the livelihoods of many households in SSA. Child labor is not considered in the above estimates or elsewhere in the paper, as the analysis only covers the working-age population. Yet SSA has the highest share of children engaged in some kind of economic activity. Dolislager et al. (2020) estimated that labor hours contributed by people outside the working-age population (ages 65+ and under 15) accounted for about 10 percent of total labor hours recorded in low- and lower-middle-income SSA countries; the majority of this estimate was from child labor. In other regions, only 2.3 percent of total reported hours over the year were attributed to children under age 15. Most children work part time in a household activity (farming or business). While not intrinsically harmful—indeed this type of activity can help transfer valuable skills—studies have nonetheless found that child labor in SSA is also associated with lower school attendance and achievements (Filmer & Fox, 2014). Excessive child labor, thus, contributes to poorer labor market outcomes for youth.

Box 1: How many new jobs does SSA need every year?

It is common for articles and blogs on youth employment in SSA to open with a statement such as this:

"Sub-Saharan Africa will need to create 18 million jobs each year until 2035, to accommodate young labor market entrants." (Altenburg et al., 2018)

"The working-age population in the region will, on average, experience a net increase of 20 million per year over the next two decades. … How can sub-Saharan Africa add 20 million jobs a year to keep up with such pace of population growth?" (Abdychev et al., 2018).

Often the authors do not explain the origins of the estimate. Other authors (such as the one to whom the second quote belongs), simply assume everyone above the age of 15 is in the labor force.

While it is true that most of the growth in the working-age labor force in any year represents youth entering, not every youth participates, often for some good (and socially desirable reasons). As countries get richer, youth can stay in school longer. Young women in their twenties are often out of the labor force for at least part of the year owing to childbirth and their subsequent responsibility to nurse and care for babies. For example, in Ghana, the youth (age 15-24) LFPR in 1960 was 64 percent, but by 2015, with many more youth in school, it had fallen to 43 percent. For all LICs and LMICs LFPR was estimated at 45 percent in 2010, and for LMICs worldwide it was estimated at 30 percent in 2018 (WDI, 2021).

These estimates imply that Africa's labor force will only grow by about 7 million to 9 million people over the next 20 years. For a labor force currently estimated at 440 million people, this is a modest amount to absorb. However, labor forces are national, not continental, in Africa, so countries with low levels of economic growth and high levels of labor force growth (e.g., Nigeria currently) can be expected to experience more labor absorption challenges.

In sum, while the labor force in Africa is young compared with other regions, in most SSA countries, the immediate employment pressure of the youth bulge is lessening, owing to a combination of fertility declines that started in the last years of the 20th century and increased school enrollment in the 15 to 24-year-old demographic. The youth cohort entering the labor force today is much smaller than what is often projected based simply on population growth. Increased time youth spend in education, a positive development, contributes to this result. One potentially negative factor slowing labor force growth is declining female LFPR as countries get richer. While the trend in Africa is like what is observed in other regions, African LMIC countries could arrest this decline through investments and

programs that make it easier to combine employment and child-rearing, raising overall returns to public investments in education of girls, for example. To improve human development outcomes, African countries should introduce programs and policies to reduce child labor and limit marriage and pregnancy before age 18.

4. Where is Africa employed today? The growth of employment opportunities

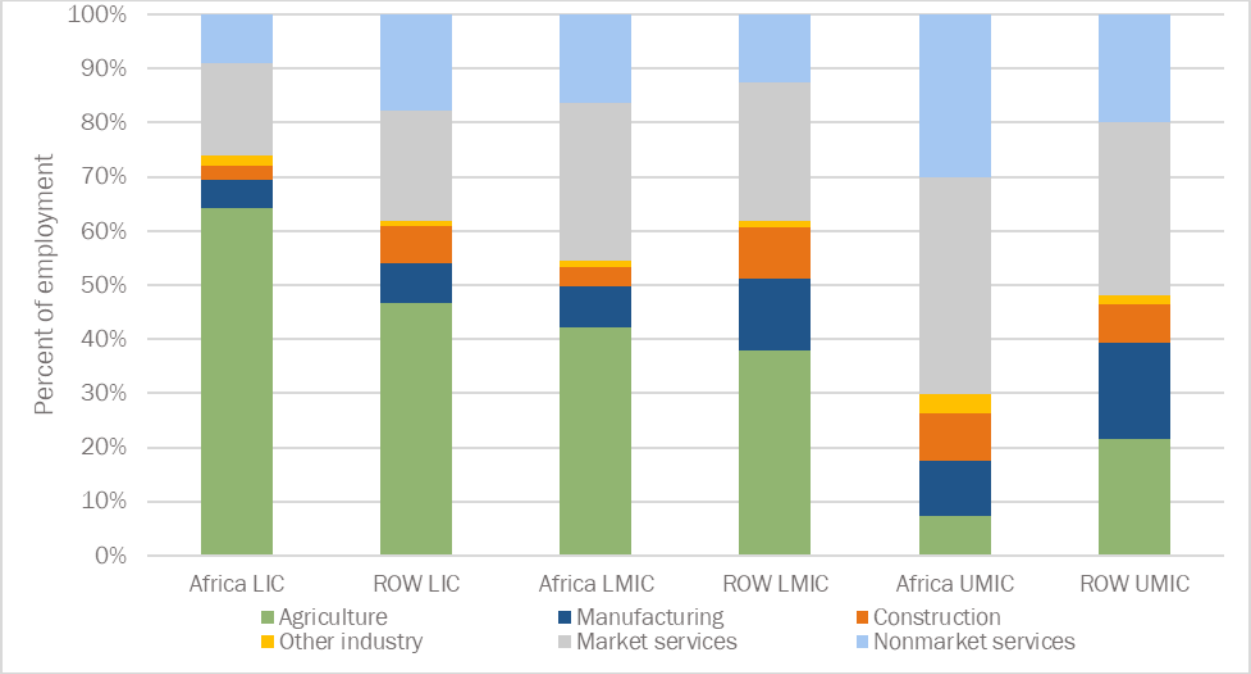
Youth entering the labor force today are more educated than their parents, and they want better jobs than their parents have. Better jobs require economic transformation—an improvement in productivity in the low labor productivity sectors and an increase in employment opportunities in high labor productivity sectors paying higher wages, and usually offering more employment security through the creation of formal wage jobs. Sustained economic transformation in other regions catalyzed the growth of higher-paying wage jobs, and, through this process, created improvements in material welfare. To what extent is the process of economic transformation creating new employment opportunities, and how do the trends compare with other regions? To address this question, we now turn to employment patterns by sector and type.

African employment profiles by sector are not very different from those of other regions of the developing world when countries are sorted by income. In LICs, the agricultural sector (including fishing and forestry), usually a low productivity sector, is where most people work (Figure 8), and Africa is no exception, although African LICs report an especially high share of employment in agriculture, reflecting high levels of poverty and low levels of transformation in SSA LICs. As countries get richer, employment opportunities in other sectors increase and the labor force, especially new entrants, are less likely to report agricultural employment (Figure 9). In both Africa and other regions, the second-most important sector group for LICs and LMICs, and the most important sector group for UMICs, is public and private services, including trade, transport, finance, and communications, as well services dominated by public employment including education, health, and public administration. The service employment share in Africa is higher in LMICs and UMICs than in other regions, especially in the UMICs, owing to the very low share of the labor force working in agriculture in South Africa. Service sector employment has been growing as a share of total employment as the share of employment in agriculture has declined (Figure 9).

Africa's employment profile does differ with other regions with respect to the share of employment in industry, including mining, manufacturing, and construction. This sector does not account for a large share of employment around the world owing to high capital intensity, but the share reported by Africans, especially in lower middle-income countries, is lower than in other developing regions. Within industry, the SSA employment share in both manufacturing and construction is lower than in other regions, while the share in other industry (mostly mining, but also utilities) is larger, reflecting the importance of mineral extraction in many African economies. The small share of employment in manufacturing in Africa has been noted by many (e.g., Newfarmer et al., 2019; Rodrik, 2015; AfDB, 2019), but the small share of employment in construction is also noteworthy given that this sector has been growing rapidly, accounting for over 25 percent of GDP. The difference between African LMICs and other regions in the construction sector is especially notable.[7]

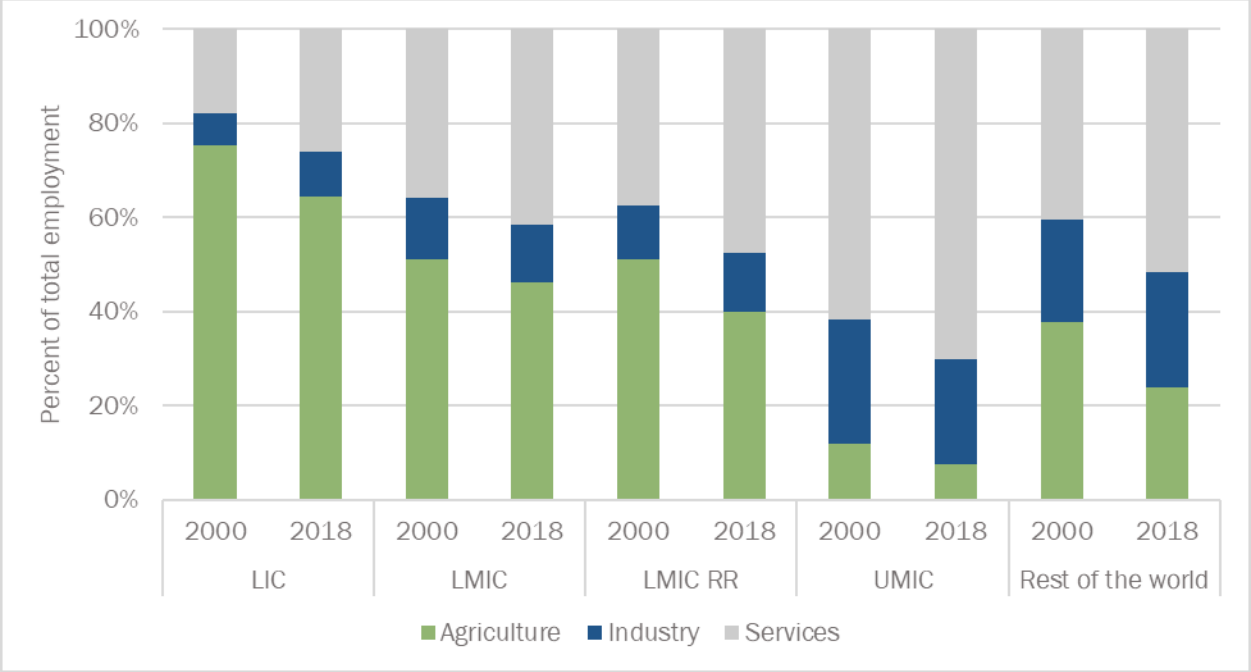
7 Steve Hartrich, (2018) offers some analysis of why this might be so.

Figure 8: Employment by sector and income group, sub-Saharan Africa and rest of world, 2018



Note: Employment weighted average. *Market services*: trade, transportation, hospitality, ICT, and finance, real estate, and professional and administrative services. *Nonmarket services*: public administration, health, education and social work, arts, entertainment and recreation, and domestic services.
Source: Employment distribution by economic activity—ILO modelled estimates, ILOSTAT database

Figure 9: Employment trends in sub-Saharan Africa, 2000 and 2018



Note: Employment weighted average.
Source: Employment distribution by economic activity—ILO modelled estimates, ILOSTAT database.

This simple picture of employment by sector is one of the most-reported employment statistics in the world, but it hides important nuances in how people work in low and lower-middle income countries. Employment in small-holder farming (SHF) alone is usually not enough to sustain a household above the poverty line (Beegle & Christiaensen, 2019), so many people, especially in rural areas, work in more than one sector. One reason is the seasonality of employment: Rain-fed agriculture usually leads to months of inactivity, so people seek opportunities in other sectors in the offseason. A second reason is that, as the agriculture sector develops, household incomes rise, bringing increased demand for nonfarm goods and services, encouraging rural households to start and maintain nonfarm businesses. In addition, as medium-sized farms with more capital become more prominent and profitable, SHFs tend to reduce their activities on their own farms to seek out opportunities elsewhere, usually off the farm. These opportunities may be farm-related (e.g., input supply or transportation of product) or nonfarm, such as miscellaneous retail trade. In rural Tanzania, survey data collected in 2005 showed that over half of those employed worked in more than one sector, usually agriculture and nonfarm self-employment (Filmer & Fox, 2014); similar results were found in 2018 by Yeboah et al. (2020) for rural Ghana, Tanzania, and Zimbabwe. This phenomenon, known as "mixed livelihoods," is common across rural areas and small towns in SSA, but less common in cities, where people are more likely to specialize in one activity or sector.

Comparing the data shown in Table 1 with that shown in Figure 9 gives an indication of the extent to which Figure 9 *over-states the importance of the agricultural sector in employment, and probably overstates the decline in employment in this sector as well*. Table 1 reports detailed data on hours worked *over the year* for the working population in six SSA low- and lower-middle-income countries. In contrast to the data in Figure 9 above, these data show that *only 37 percent of total reported hours worked were in agriculture*.[8] Reported hours worked in agriculture were higher in rural areas, but still not over 50 percent. Notably, the share of hours worked in agriculture were about the same for men and women, but men were more likely to be employed off their farm in agricultural wage work. Only in the rural hinterland (where the population density is particularly low) were more than half of total hours worked reported to be in the agricultural sector (Dolislager, 2020).

Table 1: Share of hours worked by type of employment and area

Type of Employment	Urban			Rural			Total		
	Male	*Female*	*Total*	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*
Own-farm	10	13	11	42	45	44	32	35	34
Farm wage	6	3	5	9	5	8	8	5	7
Off-farm wage	54	34	46	20	11	16	30	18	25
Nonfarm household enterprise	30	50	38	29	39	33	29	42	34
Total	100	100	100	100	100	100	100	100	100

Source: Michael Dolislager, private communication. Countries included are Ethiopia, Malawi, Niger, Nigeria, Tanzania, and Uganda; figures reported are simple averages.

Until countries reach upper-middle-income level, informal sector employment is the norm. A shortage of wage employment opportunities relative to labor supply results in the majority of employment opportunities found in in household farms and businesses—the informal sector. Nonagricultural informal sector employment accounts for 33 percent of total hours worked in rural Africa, and 38 percent of total hours worked in urban Africa (Table 1) (Dolislager et al., 2020). Unlike in agriculture, in both rural and urban areas, women are much more likely to find work in this sector. Most of these businesses are self-employment and involve retail trade (kiosks or market stalls selling household consumables or farm inputs). Other popular sectors are informal agro-processing (milling grains, pressing oilseeds, making soap or candles, harvesting, and selling honey) or other craft manufacturing

8 The countries included are Ethiopia, Malawi, Niger, Nigeria, Tanzania, and Uganda.

(making and selling furniture, baked or other cooked foods, or charcoal), and services sectors such as hairdressing, running a bar, and or doing small repairs. Many service providers are also agents for mobile money. The craft manufacturers or retail traders sell their goods and services almost exclusively to other households and are popular in rural and urban areas as they are willing to sell small amounts (1-2 cigarettes; one bread roll; a small amount of cooking oil), which is helpful for lower- and middle-income households that may not have a steady income or any credit, and so would not be able to purchase their daily needs from larger, more established businesses (Fox & Sohnesen, 2016). Importantly, this sector depends on household incomes from agriculture or wage employment, as well as income earned within the sector for demand, so any type of local economic crisis such as a natural disaster or trade or transport shock hits this sector very quickly (Filmer & Fox, 2014).

Wage employment outside of the agricultural sector—working for someone who is not a member of one's own family, and paid in cash or in kind—is generally considered more desirable employment, as income risk is lower, and conditions of work tend to be better, including the possibility of paid overtime and benefits such as paid leave and social insurance.[9] By hours worked, it is the most common type of employment in urban areas, reflecting the tendency of both public sector entities and private firms to locate there and is relatively unimportant in rural areas. Wage employment in enterprises offers opportunities for specialization, including use of skills gained through education or training, and tends to be both more productive (monetary value of output per worker) and better paid. This is less true of casual day labor or temporary jobs, which account for about half of wage employment in low and lower middle income SSA countries (Filmer & Fox, 2014).

Wage employment has grown more rapidly in non-resource-rich LMICs (Figure 10), reflecting the entrance of new firms responding to a better investment climate.[10] In all LICs and LMICs, the share of wage employment in total employment is larger for men. In the LIC countries, the share of wage employment in men's employment went from 15 percent to 20 percent, but in women's employment it only went from 7 percent to 10 percent. Women seem to be catching up in non-RR LMICs, but this may be attributable to women without wage employment dropping out of the labor force (a selectivity issue).[11]

In resource-rich LMIC countries, the expansion of wage employment has mostly been in the public sector (Table 2). Only 18 percent of the wage employment shown in Figure 10 is in the public sector in non-resource-rich LMICs, but 43 percent of the wage employment in resource-rich countries is public sector. The pattern of high public-sector wage employment and low private-sector wage employment in resource-rich economies is not unique to sub-Saharan Africa, as it is common and often worse in the Middle East and North Africa (Assaad, 2019). For example, in 2000, over 50 percent of educated new entrants to the labor force in Algeria and Tunisia took public sector jobs. In 2014, in Egypt,

Table 2: Wage employment as share of total employment in SSA LMICs and RR LMICs

	Wage employment share (percent)
LMICs	34
Of which: public sector	6
RR LMICs	23
Of which: public sector	10

Note: Employment weighted average.
Source: See Appendix A.

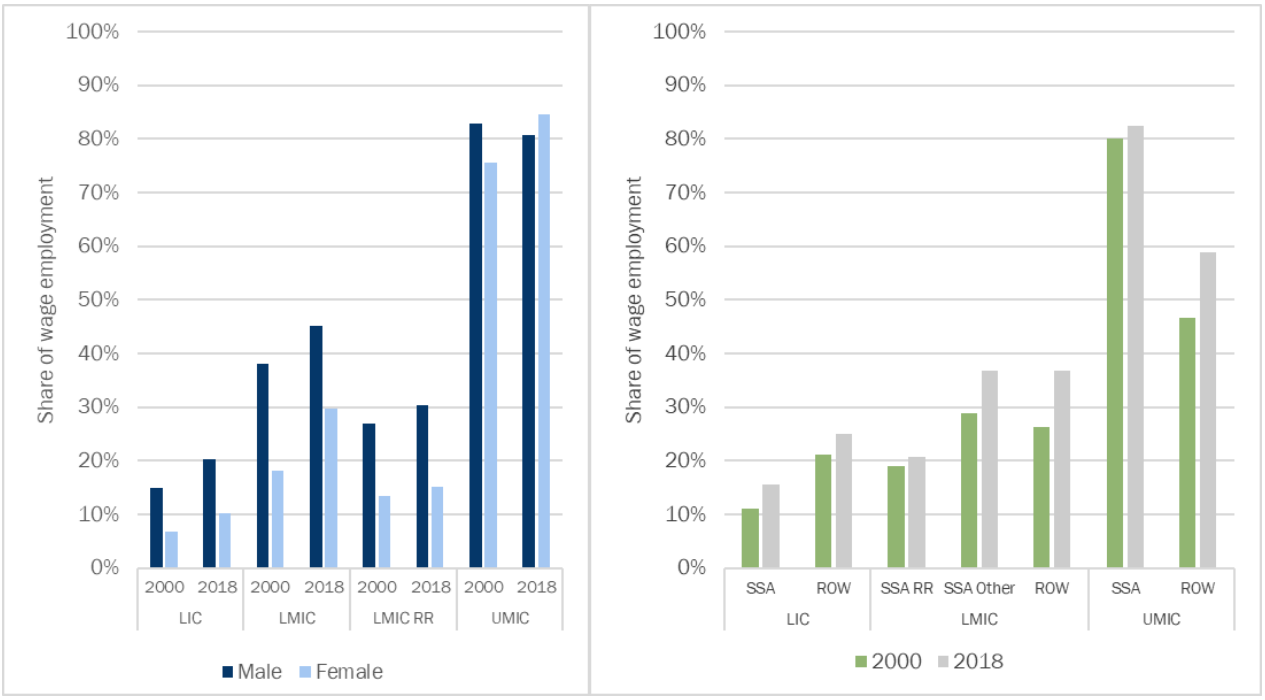
9 See ILO for a discussion of types of wage work and nonwage work, including risks and opportunities. Available here: https://ilostat.ilo.org/resources/methods/classification-status-at-work/

10 Measured by the World Bank's Doing Business Index, the highest SSA LMIC ranking is Kenya, at 56; the next four are Cote d'Ivoire at 110; Ghana at 118, Lesotho at 122, and Senegal at 123. Among the LMIC RRs, the highest is Zambia at 85; the next four are Nigeria at 131, Mauritania at 152, Cameroon at 167, and Sudan at 171. See http://documents.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf

11 On average, wage jobs are better paying than nonwage jobs. Women in LMICs who are below age 30 —ages where they would be more likely to have young children at home—are less likely to participate in the labor force than women in LICs (Figure 6). One would expect that lower -earning women would be more likely to be out of the labor force (OLF) when taking care of children if they can, as the opportunity cost of being OLF would be lower.

over 25 percent of *total* employment was found in the public sector; the share was even higher in Jordan and Algeria (Assaad, 2020). Wage employment in African UMICs is high, but outcomes in this category are dominated by South Africa, which has exceptionally low agricultural sector employment given its income level (see Figure 9), which is why African UMICs seem to be doing better than the rest of the world on this dimension.

Figure 10: Wage employment, Sub-Saharan Africa by gender and for the rest of world



Note: Employment weighted averages.
Source: Employment distribution by status in employment—ILO Modelled estimates, ILOSTAT database.

In sum, African employment patterns—reflecting the intersection of labor supply and demand—are showing signs of transformation in the LICs and LMICs. Notwithstanding the dearth of industrial employment and overall lower incomes in African LMIC countries, the share of wage employment in non-RR LMIC countries is near the average in LMICs in other regions despite rapid labor force growth, reflecting good progress towards transformation in the face of demographic headwinds. In LICs, wage employment shares are behind the other regions reflecting lower average income levels in this category compared with the rest of the world; wage employment levels are also behind in the RR countries. Most of the employment in Africa is in the private sector (including self- and family employment).

5. Unemployment, underemployment, and skills mismatch

Youth enter the labor force hoping to be able to earn a living. Sometimes there are opportunities, but they can't find them (a matching problem). This means youth need to keep searching. Sometimes youth do not have enough skills for the opportunities available, so they need to return to school or find another way to gain the skills they need. But often youth have skills, but there are few opportunities compared to the number entering the labor force. In this case, they need to look for or create new opportunities—by starting a self-employed business, for example—even though in these new opportunities, at least initially, they may not be working to their full potential. All these situations, be they unemployment (not working at all but searching), or underemployment (working below potential)

reflect disequilibria in the matching of labor supply and demand in the labor market. While they can never be completely eliminated, one objective of labor market policy is to reduce the amount of time youth and other labor force participants spend in this situation.

Box 2: Unemployment: What is it and how is it measured?

Meaningful comparisons of economies can only happen if everybody uses the same terminology and definitions. Since at least 1950, specialized U.N. agencies have established international definitions and standards for calculating economic and social phenomena to facilitate international comparisons—gross domestic product, investment consumption, balance of trade, child mortality, poverty, etc. In the realm of employment and the labor market, this work is done by the International Labor Organization (ILO). This body has defined the working-age population as ages 15-64, the employed as those who work for pay or profit, and the labor force as the employed plus the unemployed. The definitions form a simple identity:

> Working-age population = Labor force participants (employed + unemployed) + non participants (out of the labor force, or OLF)

Additionally:

- The *employed population* is defined with a reference period of 7 days; that is, those who worked at least one hour in the last 7 days (including those who were on paid or unpaid leave); while
- the *unemployed populatio*n is defined as those who (i) did not work at least one hour in the last 7 days, (ii) are available for employment, and (iii) actively searched for employment during the last 4 weeks.

Because a working-age person can have only 1 status—employed, unemployed, or OLF—the reference period of 7 days takes on an important role in developing countries and limits the applicability of the concept. In sectors such as rain-fed agriculture, where seasonality is important, the timing of a survey significantly influences the size of the employed population. A person may not be actively seeking employment during an off-season period, because seasonal job options are limited. A youth who has just left school may be doing odd jobs for at least one hour per week but substantially less than full time. During the rest of the time, they may be searching for work, but they would not be counted as unemployed. Alternatively, someone may have not worked in the last week, wants work, and is available for work, but did not actively search because they view current job opportunities as limited. These people are sometimes called the hidden unemployed.

Dissatisfaction with this international definition of unemployment has led to increased use of the concept of underemployment—someone who is working but would like to work more hours. It has also led countries, especially African countries, to created national definitions of unemployment, often called "broad unemployment" in statistical publications. Usually these national definitions drop the search requirement; some also include people who are involuntarily working part time (e.g., fewer than 20 or 30 hours per week). While national analysts and statisticians consider these local unemployment concepts helpful in describing their situation, they can create problems for cross-country comparisons as they are not consistent across countries.

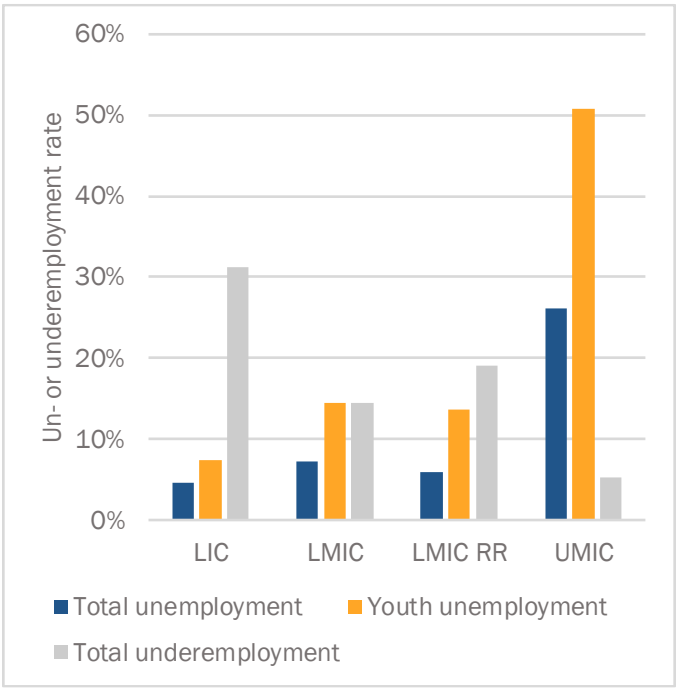
The important point is that whether a person is unemployed according to the international or local definition, or underemployed (and seeking other work or not), labor resources and human capital are being utilized inefficiently, leading to lower levels of economic growth and household welfare. A country can gain economically (and socially) by reducing this underutilization of labor. Reducing underemployment tends to be particularly poverty reducing.

Unemployment, widely viewed as a leading and reliable indicator of distress in the labor market, is not widespread in SSA until countries reach upper middle-income status (Figure 11). The pattern in SSA is like the pattern in other parts of the world, which is that the unemployment rate tends to be highest in middle-income countries (Figure 12). Open unemployment is usually low in low-income countries because it is both futile and unaffordable. Most households have limited savings to finance a job

search, and there are few wage jobs to be found. To be employed in these countries means creating your own job or joining with household members in a farming or nonfarm activity. Although youth unemployment is typically higher than the country-wide average (Figure 11), the difference is very slight in the poorest countries.

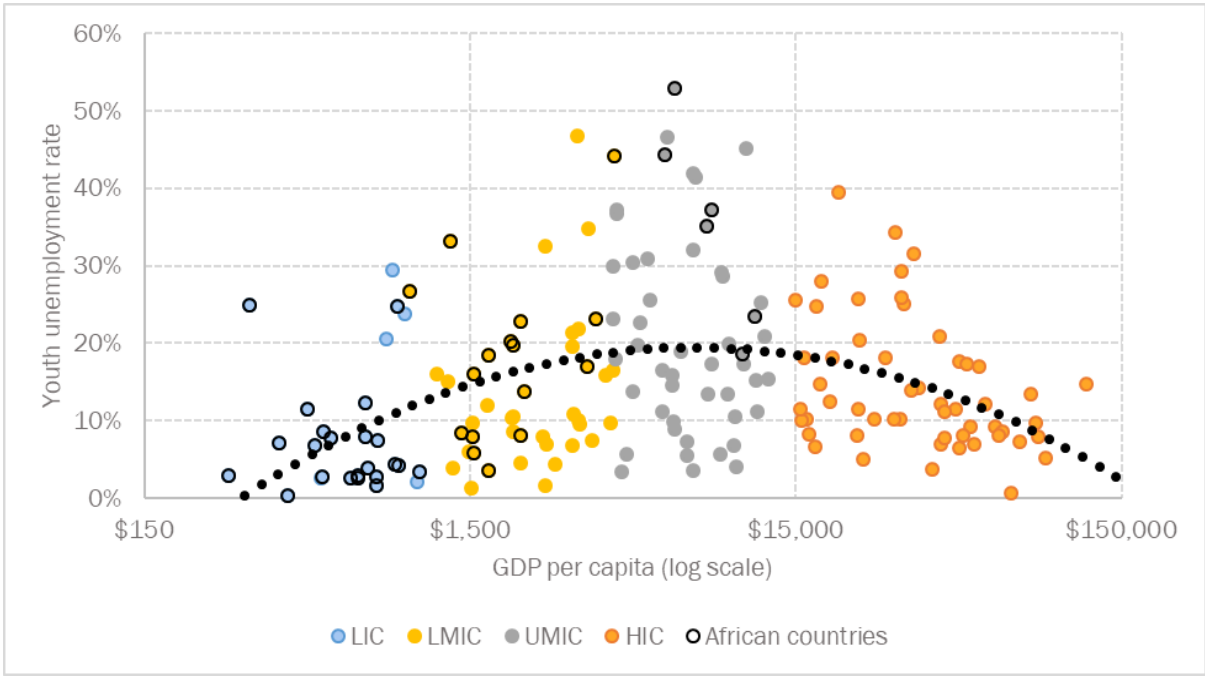
As countries get richer, they produce more wage job opportunities relative to the supply of labor, and households have more resources to finance a job search. Education levels and job aspirations also rise, however. This creates the situation of higher unemployment among educated youth, especially those with secondary school but no further education, regularly found in SSA urban areas (Figure 13). South Africa is a particularly bad example of this problem, but middle-income countries in the Middle East, North Africa, and Latin America also show a similar pattern (Palmer, 2017). One reason for the

Figure 11: Unemployment and underemployment in sub-Saharan Africa



Note: Weighted average. Underemployment is defined as working less than 40 hours per week in all activities and being willing to work more hours but not able to find work.
Source: See Appendix A.

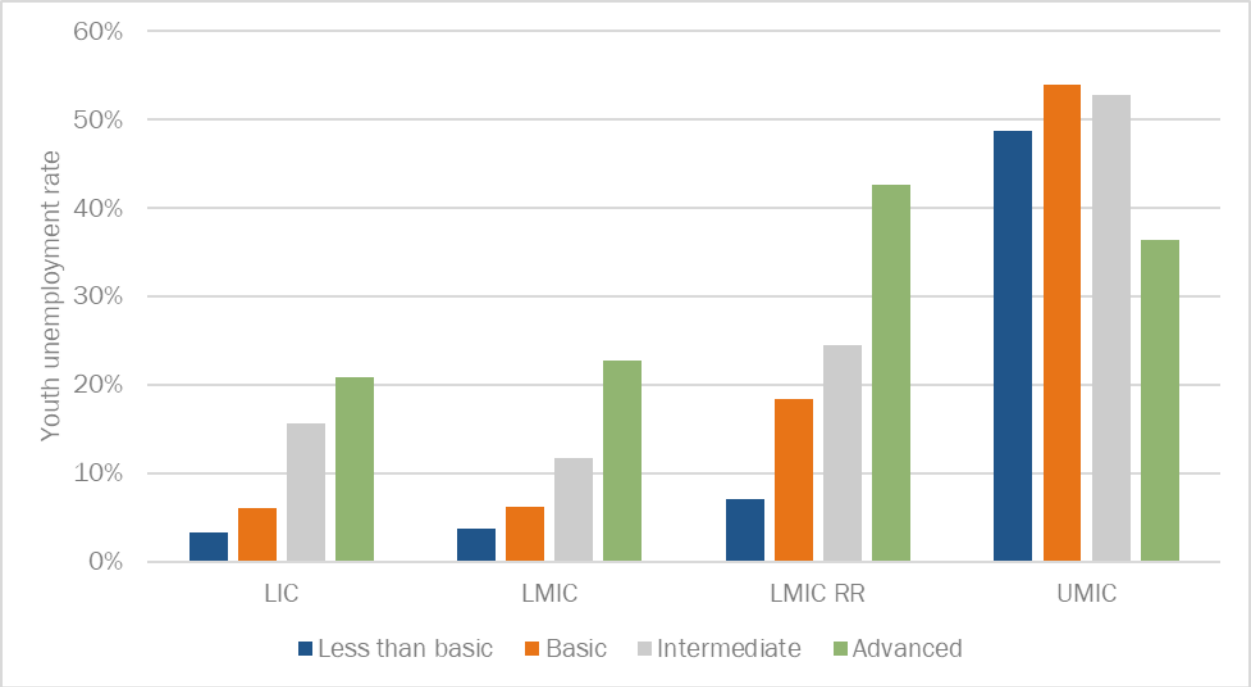
Figure 12: GDP per capita and youth unemployment rate



Source: World Development Indicators (youth unemployment—ILO modeled estimate accessed via WDI).

pattern of higher unemployment among more educated youth is that the demand for labor with intermediate skills (e.g., completed secondary education) has not grown as fast as the supply of this labor—educational attainment has risen faster than labor demand. Related to this trend is the increased capital intensity of manufacturing, which has meant that the types of jobs that people with this level of education used to take are now less common all over the world (Rodrik, 2015). Once countries reach high income stage, the average unemployment rate drops substantially as the quality of education improves, the supply of job opportunities (labor demand) relative to labor supply comes back into alignment, and education and post-school training and job assistance systems do a better job of helping match employers and job seekers.

Figure 13: Youth unemployment by education level in sub-Saharan Africa



Note on education classification: "Less than Basic" is pre-primary or lower; "Basic" is completed primary; "Intermediate" is completed secondary or post-secondary technical or vocation school/training; and "Advanced" is attended any type or level of tertiary education.[12]
Source: Youth unemployment by sex and education, ILOSTAT database.

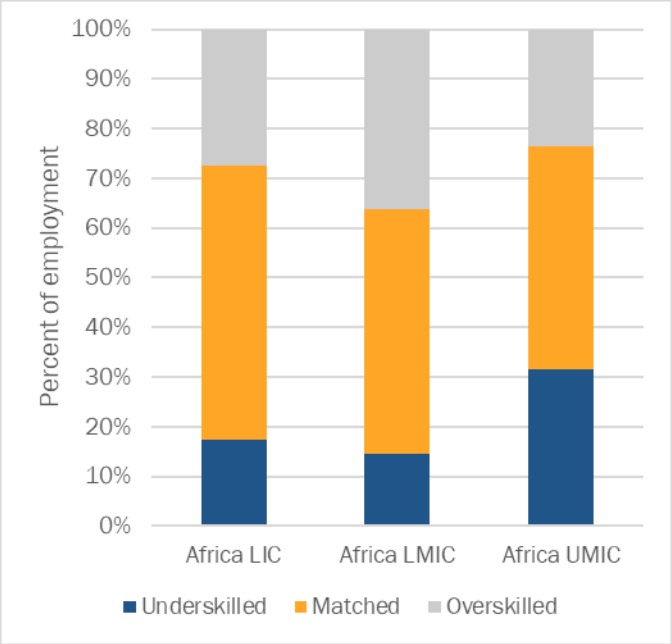
Underemployment is more common than unemployment in low and lower-middle income countries. Underemployment refers to underutilized labor. The definition most commonly measured is *hours-related underemployment*, which happens because the working person is willing to put in more hours but they cannot get more hours of work, either because of seasonality, or because the job they are doing is inherently part-time—in U.S parlance, a person is involuntarily part time. Hours-related underemployment is associated with a high share of employment in agriculture or casual labor, so is more common in poorer countries (see Figure 11).

A second definition, often referred to as a skills mismatch, is *not being able to find a job that utilizes the training or skills that a person has acquired*; for example, a taxi driver or waiter with a post-graduate degree, or a laid-off middle manager working as a retail clerk. As African countries grow their economies and expand education, skills mismatch underemployment seems to be becoming more important (Figure 14). In urban areas, World Bank STEP surveys found that 40 percent of the labor force in Ghana and 25 percent of the labor force in Kenya reported that their own education exceeds

12 For further information on education classification, see http://uis.unesco.org/en/topic/international-standard-classification-education-isced.

the education required for their current job (Handel et al., 2016). Interestingly, the most underutilized skills reported in this study were digital ones. The ILO skill mismatch measure compares the employed person's education with median years of education found by all employed people in that occupational group. Their results (as seen in Figure 14) show that, while those who seem to be well matched, statistically, with their occupation are the largest single group, the rate of overskilling (skill underutilization) is highest in LMI countries. African Development Bank (2019) found that reported overskilling increases with education level completed. Notably, the African Development Bank (2019) also finds that education is poorly correlated with labor productivity, which may be one reason why employers are less likely to hire well-educated job entrants. These results are consistent with the high rate of unemployment among more educated people in LMICs.[13]

Figure 14: Skills mismatch in sub-Saharan Africa



Note: Employment weighted average; Includes data for 21 African countries
Source: Employment by educational mismatch, statistical approach; ILOSTAT database.

The problems with the absorption of educated youth in SSA economies have been attributed in part to SSA education systems. Although African countries spend a high share of public and private expenditure on education, the efficiency of the expenditure is low. The overall quality of SSA education is poor, and learning outcomes (as measured by standardized tests) for SSA children are worse compared with their peers in other regions, even controlling for income level (Filmer & Fox, 2014; World Bank, 2018; Arias et al., 2019). The pattern is most extreme in resource-rich countries, which have some of the worst human development outcomes across the board, controlling for income (de la Brière et al., 2017). The curriculum and teaching methods are also not oriented towards developing noncognitive skills and employability knowledge helpful for navigating the labor market, especially in secondary and post-secondary education systems.

As a result, graduating youth do not know how to interact with potential employers to find a job, or to interact with self-employed mentors to find out how they could do better. Employers cite a lack of socio-economic skills as the main reason they do not like to hire youth who are recent graduates (Filmer & Fox, 2014; Fox, 2019). Post-secondary formal technical and vocational training (TVT) programs have been a massive and expensive failure (Filmer & Fox, 2014; Arias et al., 2019) in part because they do not focus on these skills, although internships within these programs seem to help build them.

Difficulty navigating the labor market is not only an urban issue; research on Nigeria and Tanzania cited in Fox, 2019 and on Ghana, Tanzania, and Zimbabwe cited in Yeboah et al. (2020) shows that secondary and post-secondary school graduates in small cities and rural towns do not have an easy time either. Rural education is of even worse quality than in urban areas and is still costly. Yeboah et

13 High reservation wages among well-educated youth may be another reason for higher unemployment, as discussed above and in Filmer & Fox, 2014.

al. (2020) report that many rural youth express disappointment with the career outcomes available once they complete junior or senior secondary school, and cite a lack of funds and/or poor exam scores as the main reason they were unable to continue their education. In the African school-to-work transition surveys, rural youth's aspirations for the type of occupation they wanted were high and were not consistent with their education—which was too low and did not provide the skills they needed—or the opportunities in their area (OECD, 2018).

In sum, SSA does not have worse youth unemployment than other regions, after controlling for income level and presence of mineral exports. Indeed, unemployment in most SSA low- and lower-income countries is below the regression line estimated in Figure 12. But outcomes could be better, especially for educated youth, as Figure 11 shows. Several micro studies have shown that African youth often have no idea where employment opportunities are expanding, or what specific jobs or occupations pay as an entry level wage (Filmer & Fox, 2014; Fox, 2019). As a result, educated urban youth in Africa spend years after leaving school searching for formal wage employment, hoping for a higher wage or better job than they are likely to receive, and ultimately the majority do not succeed (Bridges et al., 2016). It is possible that, as wage employment opportunities increase in urban and peri-urban areas, these search costs could diminish.[14] However, a stronger focus within the education system on both necessary cognitive skills as well as overall preparation for entering the labor market either as a wage employee or in self-employment could reduce these employment frictions for youth.

6. Evaluating SSA youth employment outcomes and challenges

The analysis in the previous sections shows that controlling for income group today—an indicator of economic transformation and development—SSA employment outcomes are in many ways similar to the rest of the world. This finding suggests that, as SSA countries travel on their economic development journey, they are not following a divergent path with respect to employment outcomes. The major exception is the structure of employment by sector, which exposes an SSA labor demand issue. LMIC SSA countries have not been able to generate the share of employment in industry that other LMIC countries outside of SSA have achieved. As the share of employment in agriculture has declined, the share of employment in services has grown. Much of this service employment is informal. As a result, while wage employment as a share of total employment has grown as non-RR SSA countries move into LMIC status, it often does not come with the benefits expected (income security and protection), while in RR countries wage employment is well behind the averages for LMIC countries outside of SSA. This different pattern of employment transformation has been a source of policy concern for some time (Rodrik, 2015) and is motivating the case studies in the IWOSS research project.

Most discussion of SSA youth employment issues refer to the large youth bulge within SSA demography—a labor supply problem. However, all other regions of the world have been through this demographic phase as well (Figure 2), and most countries managed to employ their youth productively. A young labor force does not by itself constitute an employment problem. In absolute numbers, the size of SSA's youth population is not large compared with Asian countries at their peak youth share of the working-age population. Rather, what sets SSA apart as a region is the slow rate of change. Of the 25 highest fertility countries in the world, all are in SSA. The first country outside Africa on the list is Afghanistan, which ranks 27th.[15] The rate of labor force growth and the dependency ratio are dropping much more slowly in SSA than in other regions, and this creates employment challenges.

14 Globally, the majority of nonfarm wage employment in developing countries is found in urban areas, and the majority of hours worked in wage employment take place there (Dolislager, et al., 2020).
15 https://worldpopulationreview.com/countries/total-fertility-rate/

The employment consequences of high fertility appear to be underappreciated in SSA compared with other regions. Fewer children are associated with higher public and private expenditures per capita on human capital (Mason et al., 2017), indicating that lower fertility could improve future employment outcomes. Lower fertility also slows future labor force growth, which could improve future employment opportunities. La Porta & Shleifer (2014) find that slower labor force growth is a necessary condition for reducing the share of informal self-employment or family employment in total employment while increasing the share of formal wage jobs. Africa is already behind the rest of the world in the share of wage employment in total employment. La Porta and Schleifer's results suggest that Africa will not be able to climb out of this deficit soon, meaning that Africa's high fertility will have long-lasting effects on future employment outcomes.

Africa has both an overskilling and an underskilling problem. Highly educated youth in LMICs are more likely to be unemployed, and, when employed, more likely to report that their skills are not being used, suggesting a skills surplus. Unemployment among educated youth is both frustrating for youth and a waste of human capital. Yet African educational attainment is low compared with income peers, whether measured by years of education or test scores. Most analysts predict that SSA will need a more skilled labor force than exists today in order to absorb the new technologies being used now or about to be deployed in other parts of the developing world (Arias, et al., 2019; African Development Bank, 2020). Education is a long-term investment, and youth entering the labor force today may work for another 40 years or more. The question is not whether to continue to expand access to quality education, but how to do so efficiently and affordably, building all the skills African youth need, while at the same time growing an economy that can use these skills.

In opinion surveys and focus groups, especially those conducted in more urbanized settings, African youth are as optimistic as youth in other regions (Ichikowitz Family Foundation, 2020). However, youth have differing views on their desired employment outcomes. Urban youth participating in the Kenya Youth Empowerment Program reported a strong preference for a formal wage job of any kind, valuing the job security and social insurance provisions, and expressed a willingness to take lower earnings for job security (Assy et al., 2018). However, these youth did not have experience working in a factory or other private business. After engaging in this type of work in Ethiopia, youth with secondary school degrees quit their wage job, preferring to start their own business (Blattman & Dercon, 2015). The African youth survey, conducted in the first half of 2019, found that about three-quarters of the mostly urban and educated youth interviewed valued technology and wanted to start their own business in the next five years, and two-thirds said that they already had a business idea (Ichikowitz Family Foundation, 2020). However, these youth may underestimate the challenges they will face: An OECD (2018) study concluded that only a small fraction of youth entrepreneurs in SSA are successful, and very few end up employing others. In SSA as in other regions, the median age of growth-oriented entrepreneurs who employ other people is 30 or above, and the average age is even higher, indicating a long tail of older entrepreneurs (Mabiso & Benfica, 2019). Researchers have found that most successful entrepreneurs first work for someone else, learning business skills.

Qualitative surveys of rural Africa youth reveal that they struggle to make a living but remain optimistic. These surveys highlight the opportunities a growing and commercializing rural area offer youth, including the promise of using new technology to increase productivity on and off the farm. Contrary to some narratives, SSA youth do stay in rural areas, search for, and find productive employment opportunities (Mabiso & Benfica, 2019). A survey in rural Ghana and Uganda depicts a youth population struggling to get land for farming or capital to start a business, and not benefiting from public investments of donor projects, despite a plethora of government and donor initiatives (Williams, 2017). Other evidence suggests that in countries with land still available, both farm and non-farm sectors provide opportunities for income generation, which youth are seizing (Sumberg et al., 2020). Yeboah et al., (2019) find that, while youth are getting access to land later in life than their parents owing to land scarcity and longer lifespans of their elders, in countries that have enabled land rental markets, youth are seizing this opportunity. Youth report that the most valuable livelihood skills they

gained were from parents, relatives, or mentors; family and friends were also the main source of capital to start a farm or nonfarm business, in addition to youth's savings (Yeboah et al., 2020).

All over the world, women face specific difficulties in accessing productive employment (World Bank, 2012), and Africa is no exception. Early marriage and childbirth interrupts human capital development and reduces income earning prospects later; they also contribute to Africa's world-high maternal mortality. Once they enter the labor force, African women have less access to wage employment, and women's farms and businesses are on average less productive than men's, reflecting disparities in access to land, capital, and financing, as well as earlier gender gaps in educational attainment (Beegle & Christiaensen, 2019). Women face harassment at their place of work if it is outside the home. Women also face discrimination due to social norms around acceptable activities for women as well as underestimation of their potential. In some countries, women do not have the necessary legal rights to operate an independent business (e.g., the right to own land and assets in their own name; the right to take out a loan independent of their husband, etc.) (Beegle & Christiaensen, 2019; World Bank Group, 2019). On the World Bank's composite score of women's economic legal rights, SSA scores well above the MENA and South Asia (World Bank Group, 2019). The variance is much higher than other regions, however, showing wide heterogeneity among African countries.[16] As in other regions, females of all ages spend significant time on (unpaid) household chores. Evidence on Africa is sketchy owing to lack of time-use data, but Beegle & Christiaensen (2019) estimate that adult women spend 2.5 to 7 times as many hours per week on domestic and care work than men.

7. Policy options to improve employment prospects for Africa's youth

Africa faces employment challenges on both the supply and demand sides, which negatively impact youth's prospects. On the supply side, longer life expectancy combined with a slow decline in fertility has raised labor force growth to 3 percent per annum in the last decade. Youth are entering the labor market with more education, but fewer skills than their years of education would indicate. They are also missing some key skills owing to weaknesses in educational systems. Meanwhile, slow growth in labor demand in the construction and manufacturing sectors has hindered the creation of the formal wage jobs Africa's youth desire, and what they expect their education to prepare them for. Demand for labor in formal private firms and the public sector below the fast-growing labor supply is causing informality to persist. These factors combined with an "aspirations gap" between youth's expectations and the employment opportunities available have led to unemployment and underemployment. Opportunities and outcomes are best in the non-RR LMICs, which provides a base for some optimism: If African countries can keep growing and transforming, opportunities will continue to improve.

As discussed above, the only way to improve youth's income-earning prospects significantly and sustainably is to improve all employment and earnings opportunities through economic transformation. Economic growth without transformation—as in resource-rich economies—is much less effective, as the outcomes in Africa's RR LMIC countries shows. Transformation, through the creation of modern, higher-productivity firms, can gradually replace informal employment with formal employment in Africa. Developing IWOSS sector growth is an approach that shows promise (Newfarmer et al., 2019).

The best way to increase good jobs (formal sector wage jobs) is to encourage the entrance and growth of large firms (Ciani et al., 2020). Large firms play an outsized role in economic transformation and employment creation since they tend to use newer technology, pay higher wages, and are more likely

16 Sudan is the lowest ranking country in SSA, with a score only slightly above Saudi Arabia, while Mauritius is the highest- ranking country, having the same score as Germany (and a higher score than the U.S.).

to export. They push transformation forward and support resiliency because they are better able to weather economic storms. They often structure the market for medium and smaller firms operating in related sectors who will be their suppliers and retailers, thus helping to ensure their survival as well (for example, the large automakers in the U.S., Europe, Japan, and Korea structure the auto parts supply market). Most large firms (those employing over 100) start off large, although a few start as medium-sized firms (20-50 employees) and grow (Ciani et al., 2020). Small firms do not grow large; a firm that starts with fewer than 20 employees has a less than 1 percent chance of growing to over 100 employees, even if it survives its first five years (which they mostly don't; see Quak & Flynn, 2019).

Large firms can be created through FDI or through domestic investment. But for firm creation, domestic business regulation must encourage entry. Too often this does not happen in Africa, mostly because existing large firms exercise political power to obtain regulatory hurdles that reduce competition from new entrants. For example, in Kenya, an economy with a shortage of wage employment opportunities that should have significant firm entry, only 21 percent of firms are under five years old (World Bank, 2016). Meanwhile, the correlation between productivity and employment growth is negative in Africa (Diao et al., 2021; World Bank, 2016).

Firms face other constraints in Africa as well, which raise costs relative to imports and increase risk for investors, reducing the creation of new formal sector wage jobs. The financial system is not performing its intermediation role effectively, as Africa has the lowest net credit to the private sector as a share of GDP of any region in the world (WDI, 2020). It is expensive to operate in Africa's urban areas, and, as a result, they are not fulfilling their agglomeration potential (Page et al., 2020). One issue is high land prices and land transaction costs owing to poorly functioning land tenure systems. Transportation and other logistics services prices are high in both time and money. Energy prices are among the highest in the world. While this partly reflects a major infrastructure deficit in Africa which can be traced back to colonial times, it also reflects poor management of publicly-owned service providers (Bond, 2016), an issue which could be addressed more quickly than building more infrastructure. The importance of constraints varies by country and sector, but the range argues for a comprehensive and long term private sector development strategy if youth employment goals are to be achieved (Quak & Flynn, 2019).

Raising productivity in the informal sector, both on the farm and off the farm, should be a priority for employment policy. Informal will be normal for decades even under the best transformation scenarios given expected growth of the labor force relative to available and expected future wage-earning opportunities. African agriculture is characterized by low labor and land productivity, but also wide variance, showing that there is widespread scope for improvements through public investment in research—to develop more resilient and productive crop and livestock varieties—and in infrastructure construction and maintenance—to reduce the cost of the long supply chains that get crops to urban and overseas markets and reduce post-harvest wastage (Beegle & Christiaensen, 2019). Investment in reforms and institutions that make it easier for youth to get access to land (through land sales or rentals) would also help raise productivity, as youth, with more education, can more easily adopt new technology (Mabiso & Benfica, 2019). These investments should be an employment priority. Enhancing rural-urban infrastructure will also increase productivity and earnings of non-farm household businesses in rural areas and small cities or towns.

In urban areas, policies supportive of informal business could increase incomes but urban planning in SSA rarely includes supporting this activity (Filmer & Fox, 2014). Supportive policies would include, for example, providing access to convenient work spaces (including but not limited to market stalls) with adequate infrastructure (water, electricity) where customers can easily reach vendors (such as night markets and market spaces at bus stops) (Filmer & Fox, 2014). Policies should support informal cross-border traders as well.

Improving access to digital services and increasing e-commerce opportunities by, for example, developing efficient e-commerce payment systems, would also support informal businesses through access to banking services (mobile money), customers (gig platforms), and suppliers (placing orders). Businesses started by youth could easily adopt this technology if it is affordable, as could women, who have been shown to benefit more proportionately from such technological adoption (Ahmad et al., 2020). However, this adoption has not been widespread, in part because SSA has some of the highest costs in the world for mobile cellular and broadband service. As a percent of GNI per capita, the world average monthly mobile cellular services cost is 5.7, but the African-wide average is 13 (Mabiso & Benfica, 2019). In part, this reflects a lower GNI per capita, but it also reflects some of the highest prices in the world, especially for countries in West and Central Africa. On the other hand, other African countries, such as Kenya, Nigeria, Guinea, and the Southern Africa Customs Union (SACU) countries, have demonstrated the path to lower cost services.

Youth-targeted interventions are tempting for donors and governments alike—after all, if youth are not getting the outcomes they want and need, why not help them? For the most part, this logic is faulty, as it ignores the source of the problem—the economy and the pace of economic transformation—while by attempting to help youth, it in effect blames the victim for the difficulties (Fox et al., 2020). As a result, youth-targeted interventions, especially those focused on post-education technical skill building, do not have a good track record in developing countries, and are rarely cost effective (Fox & Kaul, 2018). African labor markets, especially in LMICs, have displayed limited absorptive capacity for skilled labor—more jobs are needed. Education and training programs do not create jobs. If a training program does manage to place youth in a wage job in an enterprise, most likely this outcome is because someone else was displaced from that job (Fox & Kaul, 2018).

Few current employers cite lack of education as a major constraint to expanding employment, but they do complain about youth lacking the employability skills (non-cognitive skills and information) employers want. And youth who will not be able to get a wage job and need to run a farm or a nonfarm business as their livelihood need noncognitive skills such as negotiation, business mindset, etc. as well. Several programs in SSA have been successful at teaching these skills and are now starting to scale up (Fox & Kaul, 2018). The programs are supplementary to formal education systems, held either in the community after school or held at schools, after normal classroom instruction ceases for the day, and seem to be cost-effective models for remedying the socio-economic skill-building deficit in general education programs. Programs are aimed at helping youth start a business (micro-enterprise) have achieved these outcomes, but there is no medium-term evidence on the success of these ventures. That these programs have been structured separately from formal educational curricula is a testament to the difficulty of achieving major change in public education systems.

Evidence suggests that women in particular benefit from developing socio-emotional skills (Fox, 2019). Socio-emotional skills help women overcome barriers to improved employment, and to broader economic and social outcomes. Employment related outcomes from socio-emotional skill development programs include higher self-employment earnings through better negotiations with supplies and customers, and better access to wage jobs, perhaps through an increase in confidence as well as knowledge of opportunities. Other outcomes include later marriage and childbirth, and more economic empowerment within the household and community (Fox, 2019; Mabiso & Benfica, 2019). These results suggest a productive avenue for closing the gap between women's employment outcomes and men's.

Over the medium to long term, Africa's employment challenges could diminish if a more rapid fertility decline reduces the growth of the labor force. Although steps taken today will not pay off immediately (most of the labor force entrants for the next 20 years are already born), countries should still make investments as they can have social benefits earlier. Many countries in SSA have a high, unmet demand for contraception, indicating a fruitful area for government expenditures. Another important policy goal should be to reduce child marriage and births to mothers under the age of 18. Achieving

this goal would have payoffs in less than 20 years by reducing maternal mortality and reducing dropouts among teenage girls.

8. Conclusion

In sum, African countries, especially those that have been able to transition into LMIC status and avoid the "mineral curse" have improved employment outcomes significantly. The long period of economic growth between 2000 and 2018 no doubt contributed considerably. The main factors that hold back progress are mostly outside of the labor market and include fewer jobs created in the manufacturing and construction sectors; underdeveloped factor markets (land and finance) that inhibit the growth of formal firms and the informal sector; and social norms and lack of legal rights that hold women back. As David McKenzie noted in his review of active labor market programs in developing countries, urban labor markets work pretty well at matching youth (and adults) with the jobs available (McKenzie, 2017).

Nonetheless, youth entering the labor market, seeking employment, face a system of constrained choices. The constraints include the level of economic development and transformation—which creates better employment opportunities for all, and the rate of labor force growth, which limits the share of youth that can get those opportunities when they are created.

Africa has both an underskilling and overskilling problem. The poor quality of education systems means that years of education do not translate well into better employment outcomes, even in urban areas where the more educated labor force, especially youth, live and work. At the same time, unemployment is highest among those with the highest levels of education, and, once they enter the labor force, the well-educated are highly likely to report that their skills are not being used.

These trends suggest that African countries, especially the LMICs, have created more skills than opportunities for youth. This economic disequilibrium will not automatically be corrected by economic growth. The solution is not to reduce access to education, as youth entering the labor force today will likely have another 40 to 50 years of work. As technology changes, they will need the foundational skills that should be attained during primary and secondary education to continue to be productive. What SSA countries need is more new firms that use a combination of high-skilled and lower-skilled labor. Usually these are large (over 100 employees) firms. Both FDI and domestic investment can create these firms given the right incentives.

Owing to high labor force growth, informal will be normal. The SSA employment agenda in LIC and LMICs needs to tackle productivity issues in this sector, both on and off the farm and in urban areas. Improving access to digital services has demonstrated its value, and should be a high priority. For the most part, this means investments and policies to lower service costs.

Other factors that will continue to hold back employment outcomes for SSA youth, now and in the medium term include:

- fragility and conflict—which lower economic growth, reduce public investment, and inhibit human capital development;
- poor economic governance in resource-rich economies;
- high fertility, which inhibits human capital development, crowds youth and adults into the informal sector and, through early childbirth, negatively affects women's economic prospects; and
- laws and norms which permit or encourage early marriage and reduce economic opportunities for women.

These are medium to long-term challenges—as are the education and skills development ones—but if progress can start now, as part of a COVID-19 "build back better" agenda, constraints can be eased and future opportunities for youth can improve.

African youth are optimistic about their future, despite the struggles they face today in entering the labor force—which, for youth entering in 2020-2022, will be compounded by the COVID-19 induced recession. This optimism can be a positive force for change.

Africa still needs better data on labor market outcomes, collected more frequently. Reliable data on earnings, especially in the agriculture and nonfarm informal sectors, is difficult to find. Recent changes in the international definition of employment are making cross-country comparisons, as well as comparisons, over time, more difficult (see Appendix B). This issue needs to be addressed flexibly.

Finally, several African countries are entering or have recently entered the resource-rich club (wherein 50 percent of their exports are minerals). Some of these countries now have a vibrant private sector offering opportunities in commercial agriculture and private enterprises, as well as in informal businesses, and are developing an African digital economy based on a more educated labor force (e.g., Ghana, Kenya, Senegal). These countries should take care to avoid the mineral curse, with its negative effects on economic growth and non-mineral tradeable sectors, because the knock-on negative effects on youth employment outcomes could be serious, as the data in this paper show.

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Appendix A. Countries included and surveys used

Country	Resource/income classification	Source	Year of survey
Angola	Lower middle income resource rich	ILO	2011
Benin	Low income	WB	2011
Botswana	Upper middle income	Report	2016
Burkina Faso	Low income	WB	2014
Burundi	Low income	WB/Report	2013
Cameroon	Lower middle income resource rich	WB	2014
Cape Verde	Lower middle income	ILO	2018
Central African Republic	Low income	WB	2008
Chad	Low income	WB	2011
Comoros	Lower middle income	WB	2013
Congo, Dem. Rep.	Low income	WB	2012
Congo, Rep.	Lower middle income resource rich	WB	2011
Côte d'Ivoire	Lower middle income	WB/ Report	2015
Eswatini	Lower middle income	ILO	2016
Ethiopia	Low income	WB	2015
Gambia, The	Low income	WB/ Report	2015
Ghana	Lower middle income	Report	2015
Guinea	Low income	WB	2012
Guinea-Bissau	Low income	WB	2010
Kenya	Lower middle income	WB paper/ Report	2016
Lesotho	Lower middle income	WB	2010
Liberia	Low income	WB/ Report	2014
Madagascar	Low income	ILO	2015
Malawi	Low income	WB	2016
Mali	Low income	ILO	2018
Mauritania	Lower middle-income resource rich	WB	2014
Mauritius	Upper middle income	ILO	2018
Mozambique	Low income	ILO	2015
Namibia	Upper middle income	ILO	2018
Niger	Low income	WB	2014
Nigeria	Lower middle income resource rich	ILO	2013
Rwanda	Low income	Report	2018
Senegal	Lower middle income	Report	2017
Seychelles	Upper middle income	ILO	2017
Sierra Leone	Low income	ILO	2014
South Africa	Upper middle income	ILO	2018
Sudan	Lower middle income resource rich	ILO	2011
Tanzania	Low income	WB	2014
Togo	Low income	Report/ Labor force from ILO	2015
Uganda	Low income	WB	2016
Zambia	Lower middle income resource rich	Report	2014
Zimbabwe	Lower middle income	ILO/Report	2014

Notes on sources: "ILO" refers to ILOSTAT data base, which can be found at https://ilostat.ilo.org/data/."World Bank" refers to the Jobs Indicators data base developed by the World Bank, which can be found at https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database. "Report" refers to the tabulations of the survey produced by the country National Statistical Office.

Appendix B. Note on the consistent measurement of employment and labor force participation

In October 2013, the 19th International Conference of Labor Statisticians (ICLS) adopted a new resolution concerning statistics of work, employment, and labor underutilization (ILO, 2013, referred to as the "19th ICLS standards" or the "revised standards"), which supersedes previous international standards for labor statistics (dating back to 1982). A major change was a narrowing of the definition of employment to work for pay or profit. Under the previous definition, own use production of goods (for own consumption purposes, for example, subsistence agriculture) was counted as employment. Under the new definition, it was excluded from the employment category (since the output was not sold). The definition of subsistence farming is production that is only or mainly *intended for own use.* The 2013 resolution also defined an umbrella category of economic activity called "work," which covers all productive (e.g., not leisure or self-care) activities, paid (e.g., employment) and unpaid. The latter category includes subsistence production of food, and production of household services for own use (chores and caring for family members), two activities performed primarily by women.

The purpose of this change was to respond to the charge that the previous definition of employment, by lumping work for pay or profit with own-use production work, was too broad and therefore limited the usefulness of employment statistics as an indicator of labor market performance. Similarly, the previous concept of unemployment was perceived as too narrow, since farmers producing for family use and other individuals performing own-use production work, by virtue of being considered as employed, were ineligible for classification under unemployment. In addition, the ILO argued that since production of *household services for home consumption* (e.g., household maintenance and care of individuals) were excluded from measures of employment, production of goods for home consumption should be excluded as well.[17]

This new definition has raised a number of practical issues predominantly but not exclusively in SSA, including:[18]

For the first time, *the ILO definition of employment was narrower than the definition of production (economic activities, output) include in the U.N. System of National Accounts (UNSNA)*. (see Box B.1). This means that when this definition is applied at a macro, sectoral, or household level, *agricultural sector labor productivity will be overestimated*.

Measurement of the concept of *intended subsistence production* is far from simple. Whose intent was to be measured—the person who worked the plot or the person who takes agricultural goods to market? These may not be the same person in the household. In addition, when should intent be measured—at planting time or at harvest time?

SSA farmers often have multiple plots. Some may be used to grow food (which the family may or may not eat), and some may be used to grow commercial crops (food or nonfood). *What threshold determines whether someone is a subsistence farmer (not employed) or an employed farmer*?

Consistency with previous time series is impossible. Data on labor force activities that was collected and tabulated in the past did not envisaged this new definition, and therefore did not collect the data needed to operationalize it. As a result, once the new definition is applied, a consistent time trend

17 See International Labor Organization (ILO), 2013. An alternative often supported by gender specialists and others—to include all home-produced goods and services in employment—seems not to have been considered, as this would broaden the definition of employment too much. In addition, the UNSNA has yet to include home-produced services in their definition of output (GDP), arguing that owing to quality differences and other factors, they are too hard to value. However, these activities are included the optional "satellite accounts" section of the UNSNA.

18 See Gaddis, et al. (2019) for a discussion of these issues.

cannot be constructed unless both the old and new definitions are tabulated. This does not seem to be taking place (see table and discussion below).

As countries are applying the new definition in different ways and at different times, *cross-country consistency in employment and labor force statistics will be impossible*. Analysts will need to take extreme care in cross country comparisons.

The new definition will primarily affect labor statistics in LICs and LMICs; the majority of LICs in the world are in SSA. Overall, African agriculture has the highest share of non-marketed food among developing country regions. As African agriculture develops and becomes more commercialized, the issues with the new definition will fade. Already, in countries with a more commercialized agricultural sector, such as Ghana, the effect of the definition appears small, compared with, for example, countries with a lower share of production marketed, such as Malawi (Gaddis, 2019).

Table B.1 below provides some examples of the within-country inconsistencies that can occur with the introduction of the new definition into surveys and tabulated statistics. Recent surveys for Ghana, Rwanda, and Zambia using the new definition show at least a 20 percentage point drop in LFPR rates for men and women. While some downward trend might be expected, in the worst cases, LFPR for women in Rwanda and Zambia is half of what it was just a few years earlier. The share of employment in agriculture also declines substantially in all three countries, although more for women than men in each case. The exclusion of subsistence farmers artificially raises the share of employment in manufacturing and services, perhaps falsely implying that structural transformation is occurring in African countries when in it might not be.

Since the new definition was implemented, Rwanda has included subsistence farmers as a separate category in its labor force reports, allowing for comparison with historical data. While not broken down by gender, the labor force participation rate in Rwanda in 2017 using the old definition was 78 percent compared to 53 percent using the new definition, highlighting the large share of the working-age population excluded from employment.[19] Similarly, employment in agriculture rises back to 63 percent moving using the new definition.

Table B.1: Labor force participation and employment in agriculture by gender

			Male		Female	
Country	Year	Source	LFPR	Agriculture	LFPR	Agriculture
Ghana	2017	ILO	0.59	0.43	0.55	0.29
Ghana	2012	World Bank	0.81	0.50	0.77	0.44
Rwanda	2017	ILO	0.61	0.34	0.44	0.51
Rwanda	2013	World Bank	0.87	0.62	0.86	0.83
Zambia	2017	ILO	0.45	0.24	0.28	0.23
Zambia	2015	World Bank	0.72	0.56	0.56	0.62

Sources: ILO (ILOSTAT) and World Bank Jobs Indicators database.

One option now being implemented in some rural household surveys is to collect data so that employment, according to both the old and the new definitions of employment, can be estimated. This strategy will remove the overestimation bias in aggregate measures of agricultural labor productivity.

19 Data from Rwanda's August 2017 labor force report. https://www.statistics.gov.rw/publication/labour-force-survey-report-august-2017

Box B.1 Simple explanation of concordance of measures between national accounts (GDP, regulated under UNSNA) and employment (regulated by ILO)

	Marketed output	Not marketed (household use)	Not marketed (public or private sector)
Goods	Output produced in a firm or a household (including marketed farm production or informal production (furniture, baked goods, beer, etc.)	Household farm production household production of durable goods Household water, fuel supply (e.g. fetching water)	
Services	Services produced by a firm or a household (including hairdressing done at home, maid or security services done by a hired person in a private home, etc.)	Home care services or chores provided by a member of the household	Public sector services Services provided by volunteers (churches, volunteer organizations, etc.)

Everything colored in yellow and in blue is measured as national output (whether produced in formal economic units or in informal economic units). It would be the numerator in a measure of labor productivity (output/unit of labor).

The hours spent on activities colored in yellow are considered employment by the ILO (whether produced with formally employed labor or informally employed labor).

The hours spent on everything covered in blue and in gray are considered "work" by the ILO but not employment (and therefore anyone engaged solely in these activities is not considered to be in the labor force).

The 19th ICLS created the blue cell—it was previously yellow. All other cells were the same color now and before. Note that a major focus of U.N. and IMF statistical TA has been to include, as much as possible, output from the blue cell into national GDP, including more home-produced output caused big jumps over the last decade in GDP per capita in some African countries. In effect, the ILO and the UNSNA have moved in opposite directions with the ILO's adoption of the 19th ICLS.

On the other hand, if the UNSNA agreed to count the service-producing activities of households for own use as output, then a measure of labor productivity in this domain could be constructed. This could provide an even stronger argument for including all production of goods and services for household use (work done primarily by women) as employment as well.