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Rural Employment in Africa: Trends and Challenges

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Abstract

Africa's rural population continues to expand rapidly, and labor productivity in agriculture and many rural-off farm activities remains low. This review uses the lens of a dual economy and the associated patterns of agricultural, rural, and structural transformation to review the evolution of Africa's rural employment and its inclusiveness. Many African countries still find themselves in an early stage of the agricultural and rural transformation. Given smaller sectoral productivity gaps than commonly assumed, greater size effects, and larger spillovers, investment in agriculture and the rural off-farm economy remains warranted to broker the transition to more and more productive rural employment. The key policy questions thus become how best to invest in the agri-food system (on and increasingly also off the farm) and how best to generate demand for nonagricultural goods and services that rural households can competitively produce. Informing these choices continues to present a major research agenda, with digital technologies, the imperative of greening, and intra-African liberalization raising many unarticulated and undocumented opportunities and challenges.

1. INTRODUCTION

There are important linkages between employment, economic growth, and poverty reduction. Labor is often the only productive asset of the poor, and labor productivity and employment expansion are important drivers of economic growth. From a conceptual point of view, the development of rural labor markets can also be a major catalyst of pro-poor growth. At the same time, it is expected that the African population will continue to grow at a fast rate in the next decades (at about 2.5% per year; **https://www.un.org/development/desa/pd/**) and that by 2030 90% of the world's poor will live in Sub-Saharan Africa, most of them in rural areas (Beegle & Christiaensen 2019). This suggests that rural employment in Africa will be a major factor in absorbing the growing labor force, in preventing an exodus from rural areas, and in alleviating remaining poverty.[1] Yet, until a decade ago, rural labor markets have largely been neglected in research and development policy thinking (Cramer et al. 2008, Maertens & Swinnen 2009).

The attention in the United Nations' Sustainable Development Goals (SDGs) to fostering full and productive employment and decent work for all (SDG 8) has further triggered a debate on the quantity versus quality of rural employment (Ayenew et al. 2017, Nattrass & Seekings 2018). Recent developments add new urgency to this debate. The ongoing processes of mechanization and digitization in African agri-food systems, which accelerated through the coronavirus disease 2019 (COVID-19) crisis, might have important consequences for the creation of rural employment, the transition from agricultural to nonagricultural employment, and the productivity of labor in rural areas more broadly (Christiaensen et al. 2021, Daum & Birner 2020, Van Hoyweghen et al. 2021). Moreover, climate change and environmental degradation, as well as the COVID-19 pandemic, motivate a transition to a green(er) and more resilient economy, with important consequences for employment in agriculture, energy, and other carbon-dependent sectors (ILO 2018). Finally, with the implementation of the African Continental Free Trade Area since January 2021, Africa is going through an important trade liberalization process that is expected to vastly expand both intra-African food trade and agricultural employment (World Bank 2020).

This article reviews the recent literature on rural employment in Africa. It introduces a conceptual dual economy framework to discuss how rural employment is expected to change with the process of agricultural, rural, and structural transformation (Section 2). Broad regional trends on rural employment in Africa, distinguishing between five regions and using International Labour Organization (ILO) statistics, are then depicted in Section 3. Against this background, Section 4 reviews the empirical literature on full and productive employment within the broader rural economy. The governance of decent work and the inclusiveness of rural employment in Africa with a specific focus on gender, youth, and remoteness are addressed in Section 5. Key research gaps and emerging issues are discussed in Section 6 to conclude in Section 7 with key guiding principles when designing policies to foster full productive employment and decent work for rural Africa.

2. CONCEPTUAL CONSIDERATIONS

2.1. Characterizing Rural Employment

Rural employment includes different forms of employment in different sectors, which are summarized in **Table 1**. The rural labor force can engage in agricultural or nonagricultural jobs, where they can be self- or wage employed. Agri-food system employment consists of on-farm and off-farm employment in agricultural value chains (food storage, processing, distribution, and

[1] An estimated 82% of Sub-Saharan Africa's extreme poor currently live in rural areas (Beegle & Christiaensen 2019).

Table 1 Defining different types of rural employment[a]

Employment type	Agricultural employment	Nonagricultural employment
Wage employment		
Paid employment (formal or informal) Explicit or implicit employment contract (casual, temporary, or permanent) Remuneration based on salary or wage (time or piece rate wage) Workers are employees and hired workers	Hired workers on family farms: often informal or semiformal agricultural wage employment Hired workers on corporate farms, on plantations, and in agro-industrial companies: formal agricultural wage employment	Hired domestic workers Hired workers in family-owned nonfarm small- or medium-sized enterprises Employees in nonagricultural corporate enterprises
Self-employment		
Jobs in own or family enterprises (formal or informal) No employment contract Remuneration based on profits derived from produced goods and services Workers are employers, own-account workers, or contributing family workers	Own-account workers: owners of a small- or medium-sized farm enterprise Contributing family workers in a small- or medium-sized farm enterprise Employers: owners of a farm enterprise engaging workers as employees	Own-account workers: owners of a small- or medium-sized nonfarm enterprise Contributing family workers in a small- or medium-sized nonfarm enterprise Employers: owners of a nonfarm enterprise engaging workers as employees

[a]On-farm employment refers to agricultural self-employment; off-farm employment refers to agricultural wage employment plus nonagricultural wage employment and nonagricultural self-employment; nonfarm employment refers to nonagricultural wage employment plus nonagricultural self-employment. Based on definitions from the International Labour Organization (**https://ilostat.ilo.org/resources/concepts-and-definitions**).

services). Rural households and individual household members can also be employed in multiple concurrent jobs, holding a diversified portfolio of on-farm, off-farm, and nonfarm jobs.

A distinction can be made between formal and informal sector employment, with the latter referring to jobs in enterprises that are not constituted as separate legal entities independently of the individuals or households owning the enterprise (Hussmans 2004). Both wage and self-employment, whether in agriculture or not, can be formal or informal sector employment. Wage employment can be casual (e.g., on a daily or seasonal basis), temporary (fixed-term contract) or permanent, and can be part- or full-time. Remuneration of wage employment can be in cash or in kind and based on a time rate (e.g., wage rate per hour) or piece rate (e.g., wage rate for a completed task).

2.2. Historical and Theoretical Perspectives

Until recently, Africa has been experiencing economic growth and a profound economic transformation that started in the early 2000s (Badiane et al. 2021). Economic transformation is described as a process of agricultural, rural, and structural transformation (Jayne et al. 2018, McMillan et al. 2014). Agricultural transformation entails a shift from a traditional or subsistence-oriented and farm-centered agricultural sector with low capital intensity and low land and labor productivity to a commercially oriented agri-food system with higher levels of productivity and better integration in value chains with vertical linkages between farm and off-farm sectors (Badiane et al. 2021, Reardon 2015). Agricultural transformation can be triggered by various driving forces, such as technical innovations, agro-industrialization, dietary changes, value chain development, or the introduction of higher-value crops (Reardon 2015; Tschirley et al. 2015a,b).

The broader process of rural transformation entails a larger diversification of rural livelihoods, an increased importance of rural off-farm and nonfarm activities, and a stronger interaction

between rural areas and urban centers (Djurfeldt 2015, Djurfeldt & Djurfeldt 2013). Rural transformation can be brought about through multiplier effects from agricultural transformation and expenditure linkages between farm and nonfarm rural sectors. As agricultural productivity and farm incomes rise, increased purchasing power among the rural population creates demand for local nonagricultural goods and services, as well as financial possibilities to invest in nonfarm businesses. In addition, agricultural and rural transformation is embedded in economy-wide structural transformation, entailing a shift from agriculture to industry and services in employment and national income, and in stronger urbanization (Jayne et al. 2018).

The process of agricultural and rural transformation is associated with important changes in rural employment (Jayne et al. 2018, Yeboah & Jayne 2018). In a traditional subsistence-oriented rural society or sector, employment is predominantly informal self-employment in agriculture, and labor productivity is low. Agricultural transformation increases labor productivity and the earnings of those who are self-employed in agriculture. Labor-intensive technological change might create a demand for (informally) hired labor on family farms while commercialization of farm produce and increased farm earnings enable family farms to pay wages. For example, it is observed that increased commercialization through contract farming and supermarket procurement leads to increased use of hired labor on the farm (Bellemare 2018, Rao & Qaim 2013). But mechanization and new institutional arrangements could also reduce labor intensity in agriculture, creating a need for off-farm jobs (Daum & Birner 2017, 2020; Ruml & Qaim 2021).

In addition, the agricultural transformation process can create (formal) off-farm jobs on larger-scale farms and in agro-industrial companies and a diversity of nonfarm jobs in down- and upstream sectors of food supply chains (e.g., Krumbiegel et al. 2018, Maertens & Swinnen 2009, Peter et al. 2018, Suzuki et al. 2018, Van Hoyweghen et al. 2020). Further rural transformation creates (informal) self-employment in small and medium nonfarm enterprises and (formal) wage employment in larger nonfarm businesses in emerging rural towns. In general, the agricultural and rural transformation process is associated with an increased importance of nonagricultural over agricultural employment, wage over self-employment, and formal over informal employment and can trigger rural-rural migration from more remote low-productivity rural areas to rural areas and towns that are transforming faster to higher productivity. Finally, structural transformation might be associated with rural-urban migration and an outflow of labor from agriculture and rural areas, triggered by job creation and wage increases in urban areas.

Agricultural and rural transformation is conceptually associated with a shift from less-productive to more-productive rural employment.[2] In a neoclassical framework with a competitive labor market, expansion of the more productive rural (farm or nonfarm) sector and associated increased demand for labor in this sector would drive up rural wages and improve job quality. Under neoclassical assumptions, the transformation process would foster full and productive employment as well as decent work through a relocation of labor from traditional subsistence-oriented farming to modern farm and nonfarm sectors with higher labor productivity and earnings.

When considering a Lewis dual economy model (Lewis 1954), however, full and productive employment and decent work are not necessarily progressing concurrently (Diao & McMillan 2018, Diao et al. 2018, Gollin 2014, Wang & Piesse 2013). The existence of within-country productivity gaps and the availability of surplus labor, key features of a Lewis dual economy model, have important consequences for how rural employment expansion, labor productivity, and wages evolve. Surplus labor in the traditional low-productivity agricultural sector might result in a completely elastic labor supply in the modern higher-productivity (farm or nonfarm) sector. This

[2] Amadou & Aronda (2020) indicate that in Central and Southern Africa labor is reallocating toward less-productive instead of more-productive sectors.

would enable the transition of labor to the more productive sector at wages that are only slightly higher than earnings per worker in the traditional sector. As long as surplus labor in the traditional sector is not exhausted or replenished through population growth, labor can be attracted to the modern sector without a modern sector wage increase, thereby accelerating capital accumulation, growth, and employment expansion in the modern sector. Only when surplus labor in the traditional sector is exhausted and labor can no longer be withdrawn from the traditional sector without affecting output in that sector, referred to as the Lewis turning point, will wages (and employment conditions) start to improve and will the labor market become more competitive.

This implies that agricultural and rural transformation would initially be associated with employment expansion, reduction of underemployment, and increased labor productivity (in the aggregate) but not with increased wages or improved working conditions. Only in later stages of economic transformation, when labor can no longer be extracted without reducing output in the traditional sector and the labor market becomes competitive again, would wages increase (in both the traditional and modern sectors). In a dual economy with high productivity gaps and surplus labor, market mechanisms are unlikely to impart higher wages and better working conditions in initial stages of transformation and growth, even when the more productive sector expands.

The Lewis model provides a powerful initial framework to analyze the evolution of rural employment patterns. Yet, a few additional considerations must be considered. In practice, labor might not move automatically (despite productivity gaps) because of important barriers to factor and labor mobility following market imperfections and institutional constraints (Collier & Dercon 2014, Restuccia 2016). Therefore, for labor to move, wages in higher productivity sectors likely have to be higher than what the Lewis model predicts. In addition, removal of these barriers is needed to facilitate workers to move from less-productive subsistence agriculture and rural household enterprises to larger, more productive farm entities and off-farm wage jobs, and to generate more productive full employment. However, this holds only if observed productivity gaps represent real productivity differences and not measurement error or unobserved heterogeneity (Gollin & Udry 2021). Off-farm workers are, for example, typically better educated such that productivity differences may merely reflect differences in ability. Seasonal labor constraints in agriculture may further prevent agricultural workers from moving, at least not without reducing agricultural output, as assumed in the Lewis model.

Spillover effects are further abstracted from in the Lewis model. Instead of aiming at the most productive segments and activities, job generation within the low-productive segments could also be targeted with intermediate technologies (e.g., consider the two-wheel versus the four-wheel tractor). These would be more easily accessible and adoptable by more people. Increasing the earnings of more people with a little, even though possibly generating less added value in the aggregate than when increasing the earnings of fewer people with a lot, could induce larger demands for locally produced goods and services, have a greater impact on the local economy and employment, and instigate a more virtuous cycle of growth and rural job creation (Mellor 2017). Much also depends on the commensurate demand patterns, with richer consumers demanding higher-value products (including more protein-rich, processed, and convenient foods), which typically also require more complex technologies and skills to produce. Although technology choices largely drive productivity, investing in productive, but not necessarily the most productive, technology may thus still be optimal in low- and lower-middle-income countries (Lagakos 2016), exactly because of their lower incomes.[3]

[3]The lower share of modern retail establishments, such as supermarkets in lower-income countries, is consistent with the associated demand patterns, Lagakos (2016) argues. Poorer consumers are less likely to be

In what follows, we review the empirical evidence on these different processes to help adjudicate more effective areas of policy interventions and highlight remaining research gaps.

3. SOME REGIONAL TRENDS

Figure 1 describes trends in rural employment across different regions in Africa for the period 2005–2019, using annually interpolated, survey-based estimates from the ILO. Data are for rural areas, but definitions of what constitutes a rural area may vary substantially in national statistics. It is also important to note that these regional estimates may hide intraregional variation across countries, may be influenced by large countries (such as Nigeria in Western Africa or Ethiopia in Eastern Africa), and may lack detail in employment trends. Nevertheless, they help set the stage.

The regional trends show that the transition out of agricultural employment and into wage employment and the aging of the rural labor force are most pronounced in Northern and Southern Africa. These two regions also include mainly upper- and lower-middle-income countries. Rural transformation is least noticeable in Eastern and Central Africa, regions that include a mix of low- and lower-middle-income countries. Agriculture still accounts for 80% or more of rural employment in these regions. In Eastern Africa the absolute number of workers in agriculture continues to increase substantially. Western Africa displays a particularly interesting pattern. It combines a mix of low- and lower-middle-income countries, but it is also experiencing a more visible transformation out of agricultural employment (from 72% in 2005 to 58% in 2019), albeit not into wage employment. Broadly speaking, these regional employment trends correspond to the patterns of (early stages in) agricultural, rural, and structural transformation.

The data do not support the idea of a general feminization of the rural or agricultural labor force. However, there are pertinent regional differences. Female rural workers are leaving agriculture much more rapidly than male workers in Western Africa, but they primarily remain in self-employment. Only in Northern and Southern Africa are female workers moving into wage employment. Finally, the data point to a youth outflow from the rural labor force and to youth and general unemployment problems in Northern and Southern Africa, but not in other regions.

4. FULL AND PRODUCTIVE EMPLOYMENT

4.1. Sectoral Productivity Gaps

As shown in **Figure 1**, many rural African workers continue to earn much of their income in agriculture, self-employed on the farm.[4] Yet, agricultural labor productivity remains low (Fuglie et al. 2020) and quite a bit lower (two to three times) than average labor productivity elsewhere in the economy (Gollin et al. 2014).[5] Recent studies, using more detailed microdata, show that when expressed per hour worked, instead of per worker, and controlling for worker

willing to pay for higher-quality products and less likely to own automobiles that make bulk purchases feasible and efficient.

[4]Rural households in Africa spend on average 38% of their labor time self-employed on the farm and only 3% as agricultural wage laborers (IFAD 2021).

[5]Based on a detailed cross-country analysis, these authors report the ratio of nonagricultural output per person to agricultural output per person to be 3.5 on average across 151 countries, with a median gap of 2.6. This implies that value added per worker is about three times higher outside agriculture than within agriculture. Among the poorest quartile of these countries, many in Sub-Saharan Africa, the mean gap rises to 5.6. The gap drops on average by approximately one-third when accounting for sectoral differences in hours worked and educational attainment and among the poorest countries by approximately 50% to between 2.3 (median) and 3 (average).

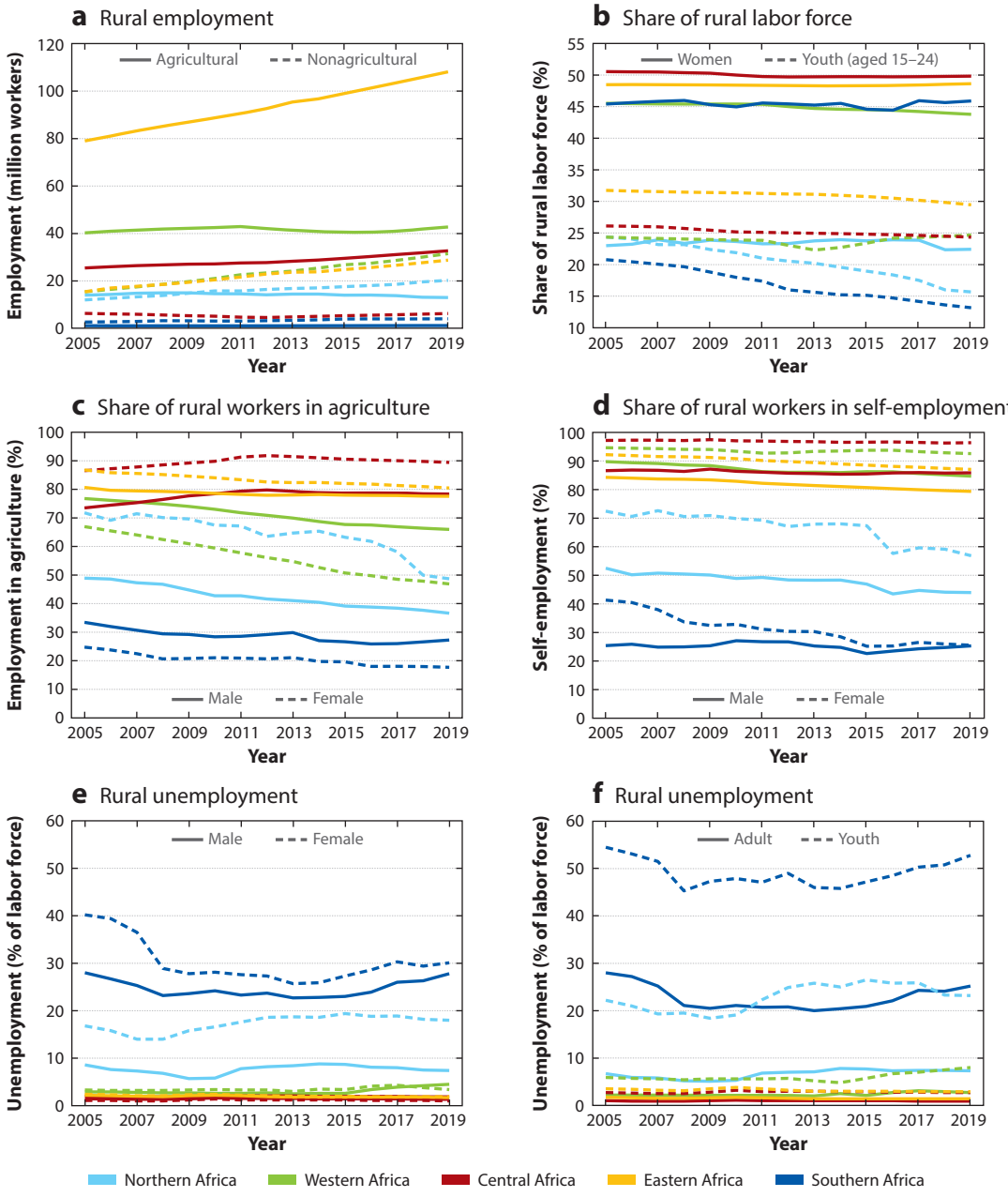

Figure 1

Rural employment trends across African regions (2005–2019). (*a*) Agricultural and nonagricultural rural employment. (*b*) Share of women and youth (aged 15–24) in rural labor force. (*c*) Share of male and female rural workers in agriculture. (*d*) Share of male and female rural workers in self-employment. (*e*) Rural unemployment among male and female rural labor force. (*f*) Rural unemployment among adult and youth rural labor force. Data from International Labour Organization (ILO)-modeled estimates derived from ILOstat (**https://ilostat.ilo.org**).

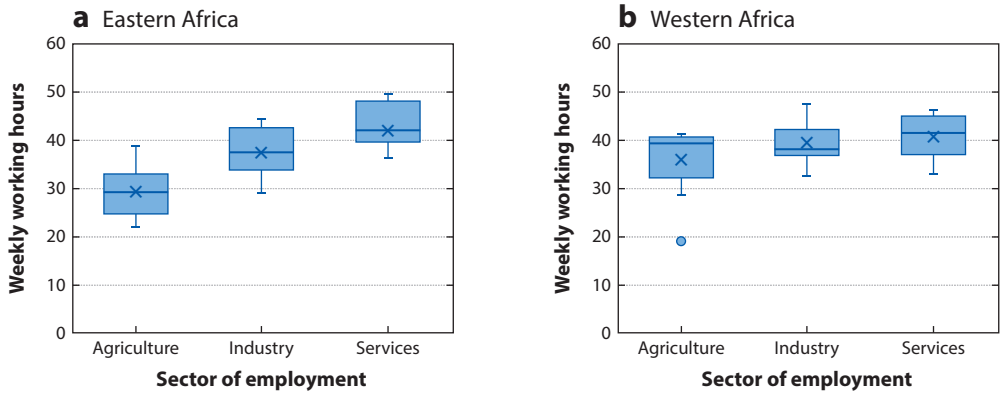

Figure 2

Weekly working hours for rural workers in (*a*) Eastern and (*b*) Western Africa. Eastern Africa includes data from Burundi, Kenya, Madagascar, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zambia, and Zimbabwe. Western Africa includes data from Burkina Faso, Côte d'Ivoire, Ghana, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo. Data are from 2019 (Kenya, Rwanda, Zimbabwe), 2018 (Zambia, Mali), 2017 (Uganda, Côte d'Ivoire, Ghana, Niger), 2015 (Madagascar, Mozambique, Senegal), 2014 (Burundi, Burkina Faso, Liberia, Sierra Leone, Tanzania, Togo), and 2013 (Malawi, Nigeria). Graphs are based on estimates from International Labour Organization (ILO)-compiled survey data derived from ILOstat (**https://ilostat.ilo.org**).

heterogeneity across sectors, the average agricultural labor productivity gap largely disappears (Fuglie et al. 2020, Hamory et al. 2021, McCullough 2017). This suggests that differences in work opportunities between agricultural and nonagricultural workers, not intrinsic differences in productivity across sectors or places, explain much of the average agricultural labor productivity gap (consistent with the Lewis assumption of surplus labor). Microanalysis of workers' time use confirms that rural workers in agriculture work fewer hours than those outside agriculture (McCullough 2017, Yeboah & Jayne 2018), with the difference more pronounced in low- and lower-middle-income countries in Eastern Africa than in Western Africa (**Figure 2**). Given the seasonal nature of (rainfed) agriculture, most farmers do not work full-time year-round (De Janvry & Sadoulet 2020). They are underemployed.

Seasonality in agriculture, with peak labor demands during planting and harvesting time, also implies that agricultural labor in rainfed agriculture is not necessarily easily available or in surplus for nonfarm activities year-round (which is contrary to the Lewis assumption). Consistently, many rural households in Africa only engage in off-farm activities for part of the year (to fill their agricultural labor calendars) (Nagler & Naudé 2017). The scope for drawing labor out of agriculture without commensurate investment in agriculture is less than it seems at first sight when looking at sectoral labor productivity differences. To generate full and more productive employment, agricultural investments that reduce peak labor demands (e.g., herbicides, mechanization) or help fill the agricultural calendars (e.g., irrigation, multiple cropping) are equally important. The insight that agriculture is not intrinsically less productive and the wide range in labor productivity observed across farms further suggest that raising labor productivity within the sector is feasible and that farming can be profitable, also in Africa. Accordingly, countries with the highest rates of agricultural productivity growth have been observed to experience the most rapid transition of the labor force out of agriculture (Busse et al. 2019, Yeboah & Jayne 2018).

4.2. Livelihood Diversification

While across countries, the majority of rural African households still specialize in on-farm activities (ranging from one-third in Kenya to 83% in Ethiopia), approximately one-third also have a

diversified income portfolio, and about 9% are specialized in nonagricultural self-employment or household enterprises (Davis et al. 2017).[6] Agricultural and rural transformation happens through sectoral specialization across households as well as sectoral income diversification within households, resulting in a diverse set of livelihoods and households (IFAD 2021). As in agriculture, labor productivity across off-farm activities also differs widely. Rural and female-headed enterprises, those located farther away from population centers, and businesses that operate intermittently have lower levels of labor productivity compared to urban and male-owned enterprises or enterprises that operate throughout the year (Nagler & Naudé 2017). High-return activities often require higher starting costs, such as transport services, or educational investment, such as professional services.

Consequently, most rural households engage in low-productive, but easy-to-enter (and exit) activities such as sales and trade. This low-productive segment of the off-farm sector often complements people's agricultural calendars and provides additional residual income. It also serves as a refuge for the landless and poor or in case of income shocks (Davis et al. 2010, Lanjouw & Lanjouw 2001). Rural household enterprises exit the market primarily due to a lack of profitability or finance and due to idiosyncratic shocks (Nagler & Naudé 2017). Supply-side constraints to accessing more productive off-farm activities, such as a lack of appropriate skills and access to credit, undoubtedly matter. However, limited demand for the goods and services that rural households could produce is quite often the more binding constraint (Beegle & Bundervoet 2019).

4.3. The Agri-Food Sector

One area where the demand for off-farm goods and services is already present is the agri-food sector. With Africa's incomes and urbanization rising over the past couple of decades, diets and eating habits have diversified. This has boosted the demand for more nutrient-dense (e.g., dairy, fruits, vegetables, meat) and convenient foods, in urban areas but increasingly also in rural areas (Reardon et al. 2021a, Sauer et al. 2021). A substantial share of off-farm rural employment is in the expanding agricultural value chains. For example, in Ethiopia, Malawi, Niger, Nigeria, Tanzania, and Uganda, food processing, food trading, and food services are estimated to provide 24% of total rural employment on average (in full-time equivalents) and 41% of all rural off-farm employment (Dolislager et al. 2021). Similar orders of magnitude are observed in Western Africa (Allen et al. 2018). Off-farm jobs in the agri-food system can help absorb some of the labor exiting the farms, and their employment share in the agri-food system increases as countries develop, which is part of the rural transformation.

Accordingly, the midstream of the agri-food sector, which in Africa is dominated by micro-, small-, and medium-sized enterprises, has grown rapidly (Reardon et al. 2021b). But fragmentation and poor quality standards mean that its full employment-generating potential is not being realized (IFAD 2021). Its job-generating capability has been tested further by the COVID-19 pandemic, which has especially affected micro-, small-, and medium-sized enterprises (Nordhagen et al. 2021). Consolidation toward more capital-intensive firms may accelerate, further hampering the agri-food sector's midstream employment-generating potential. Yet, countries that manage to raise on-farm productivity and simultaneously develop their off-farm agri-food sector reduce poverty more rapidly (IFAD 2019).

[6]The authors categorize a household as specialized if it earns more than 75% of its income from one of the following activities: on-farm (52%), agricultural wage labor (2%), nonagricultural wage labor (5%), nonagricultural self-employment (9%), and transfers (3%); otherwise, it is categorized as diversified (29%). The numbers in brackets indicate the share in each category averaged across countries. Results are based on a sample of nine countries from across Africa surveyed mostly during the 2000s (Davis et al. 2017).

4.4. Labor Mobility and Towns

In situ rural employment generation alone will not suffice to absorb all new labor market entrants and generate good jobs for all. Labor mobility to find new jobs in urban areas, as well as in other rural areas, is equally necessary, especially for rural youth who have less immediate access to land and a longer time horizon to gain from moving. Gains from migration include earnings and nonmonetary amenities (e.g., social services) and typically increase along the rural-urban spectrum: smaller for intrarural migrants, larger for those migrating to secondary towns and cities, and largest for those moving to the city (Beegle et al. 2011, Gollin et al. 2021, Henderson & Kriticos 2018). Despite these differential expected income gains, many more migrants move to rural areas and towns than to cities. In the remote region of Kagera, Tanzania, for example, intrarural and rural-town migration with a lower gain per migrant contributes more to overall income growth and poverty reduction than migration to cities with a higher gain per migrant, because more people move to rural area and towns (Christiaensen et al. 2019).

The younger, better educated, and richer are more likely to move and move farther (Young 2013). They benefit more from skilled employment opportunities in cities and are better able to overcome migration costs. Their cohorts are also fewer in number, which partially explains the smaller number of migrants to cities compared to the number of migrants to towns (or other rural areas). Recent evidence further suggests that in migrants' destination choice the deterring effects of distance far outweigh the attraction of higher wages and incomes at destination, even though less so for the more educated and richer (De Weerdt et al. 2021).[7]

Given their proximity and the type of economic activities, secondary urban centers are more accessible and provide more employment opportunities for the lower skilled and those with liquidity constraints. Returning to the home village is also easier when things go awry, thus safeguarding the village network as a safety net (Ingelaere et al. 2018). With most of the rural population in Africa living much closer to a town than to a city,[8] many of them unskilled and liquidity constrained (Beegle & Christiaensen 2019), towns and town development thus emerge as important conduits for generating off-farm employment and brokering the rural transformation (Rodriguez-Pose & Griffiths 2021), including through agricultural value chain development.

The role of rural-rural migration in agricultural and rural transformation remains poorly understood, as the focus in migration studies is traditionally on rural-urban migration. Intrarural migration is highly prevalent in Africa, however. It might offer youth an opportunity to obtain land or diversify to nonagricultural employment (Mueller & Lee 2019, Wineman & Jayne 2017). If intrarural migrants are more innovative, more capitalized, and/or more educated, they can also positively affect agricultural productivity in receiving rural communities, as observed in Zambia, for example (Chamberlin et al. 2020).

Overall, the results suggest that African countries are in many ways still at the beginning of their agricultural and rural transformation, especially in Eastern and Central Africa. Many of the observed moves out of agriculture, as in Western Africa, have been mainly into low-productive self-employment services, mostly in urban areas (Amadou & Aronda 2020, Busse et al. 2019). This has been driven in part by natural resource–fueled urbanization into consumption cities (Gollin et al. 2016). Natural resource–rich countries also invest less in agriculture, particularly

[7] In their (remote) sample region of Kagera, the balance of these opposing forces tilted in favor of the city only for those with higher secondary education, and even then, only slightly.

[8] In low-income countries, the share of the rural population living within one hour of a town is 43%, with another 20% living within 2 hours; only 13% live within one hour from an intermediate city and 7% within one hour from a large city (>1 million) (Cattaneo et al. 2021b).

in agricultural research and development (Ndiaye & Christiaensen 2021). As a result, rural economies and rural off-farm employment have been left underdeveloped, further reinforced by historical urban primacy and the relative neglect of secondary cities, as observed in Côte d'Ivoire (Christiaensen & Premand 2017). But the rural-urban moves have only imparted a one-off static gain. They did not induce a virtuous cycle of growth and good job generation, with Africa's economic growth per capita largely grinding to a halt in the second half of the 2010s.

5. DECENT WORK AND INCLUSION

5.1. Governance of Decent Work

The state of employment or labor working conditions is often captured by the concept of decent work, launched by the ILO in 1999. It usually refers to wage employees (and is not applied to self-employed workers) and relates to wages, working conditions, workers' rights, and discrimination. But there is no universal agreement on what constitutes a good-quality job and how to quantify this. The early literature on job quality conceptualizes decent work through a focus on workers' own evaluation of their job and their job satisfaction (Burchell et al. 2014). More recent studies use composite, multidimensional indices to quantify job quality, such as the study by Yu (2020),[9] who documents that employment quality in South Africa is higher in urban than in rural areas, lower in agriculture than in other sectors, higher in formal than in informal sector employment, and increasing with age and education. Yet, overall, the literature on decent work in Africa is rather thin, especially for rural areas and for employment on smallholder farms (Ayenew et al. 2017, Jäckering et al. 2021, Meemken et al. 2019).

As indicated in the conceptual discussion above, when the rural economy has dualistic Lewis-type features with surplus labor in a traditional, low-productivity sector and a rapidly expanding modern high-productivity sector that absorbs this surplus labor, wages and job quality might not improve when the rural economy as a whole transforms to higher labor productivity (even though they improve somewhat for those moving as they take on the wages of the more productive sector). Only when surplus labor is exhausted (the Lewis turning point) will wages and job quality in both the low- and high-productivity sectors improve. This is consistent with the sluggish increase in real wages in labor-intensive sectors that have expanded for decades, such as the horticultural export sector in Senegal (Maertens & Fabry 2019) and the large-scale farm sector in Kenya (Fibaek 2021).

In the early stages of agricultural and rural transformation, when dualism is present, decent work is not governed through market forces. It is usually pursued through nonmarket channels. First, decent work can be fostered through government regulations such as minimum wages and maximum working hours. Most Sub-Saharan African countries have some form of a minimum wage regulation. But these only apply to wage employees, are often only enforced in the formal sector or even in specific sectors and industries, and may be lower in rural and agricultural sectors than in urban and industry sectors (Bhorat et al. 2017). ILO (2020) estimates that 28 million workers (21% of wage employees) in Africa are paid below the minimum wage. Evidence on the implications of minimum wage policies for decent employment in Africa is very limited. Bhorat et al. (2014) document that the introduction of a minimum wage in the agricultural sector in South Africa increased farm workers' wages by 30% and increased the incidence of full-time work and

[9]Yu (2020) defines a composite, multidimensional employment quality index based on 18 indicators and 7 dimensions, including wage, work hours and flexibility, employment security, income security, social benefits, skills, and participation..

written employment contracts. Andalón & Pagés (2008) find that increases in the minimum wage in Kenya are associated with increased wages for unskilled workers in nonagricultural sectors but not in agriculture.

Second, civil society can play a role, especially through labor or trade unions. In rural Africa, workers are poorly organized, and their freedom of association and right to collective bargaining are hardly practiced (Pahle 2015). Estimates for selected African countries indicate that between 5% and 43% of employees are members of a trade union, with the highest incidence in Northern and Southern Africa, which are also more developed (ILO 2019). The evidence on the implications of labor unions for decent employment largely concentrates on South Africa, where unionization is relatively high (28%) even though it is low in agriculture (6%), thereby contributing to increased wages of members but also to increased wage inequality (Kerr & Wittenberg 2021).

Third, decent work can be transmitted from high-income to low- and middle-income countries through global value chains and governed through private standards or corporate codes of conduct. Decent work in rural Africa has been most intensively studied in this context and appears to hold most promise. Various studies across several countries and subsectors show, with worker survey data, that either wages, employment conditions, or job satisfaction (or a combination thereof) are better in export-oriented agro-industries than in other sectors, and better in companies that are certified to private standards or use stringent codes of conduct than in noncertified companies (e.g., Colen et al. 2012, Ehlert et al. 2014, Fabry et al. 2022a, Krumbiegel et al. 2018, Suzuki et al. 2018).

While employment conditions are often mentioned to be most precarious in the smallholder farm sector, decent work is most intensively studied for large farms and agro-industry sectors, and there are even fewer studies that focus on decent employment in smallholder farming and informal wage sectors in Africa. Ayenew et al. (2017) indicate that precarious employment conditions and child labor are important sources of technical inefficiency in agricultural production on family farms in Ethiopia and Tanzania. A study by Meemken et al. (2019) analyzes the implications of Fairtrade certification for the wages, working time, and contracts of hired workers on smallholder cocoa farms and in cocoa cooperatives. Their findings point out that hired workers on smallholder farms face worse employment conditions than cooperative workers and that Fairtrade does not improve their employment conditions. Using experimental methods, Jäckering et al. (2021) find that awareness campaigns can increase smallholder farmers' willingness to sign written employment contracts with hired farm workers and provide social benefits.

5.2. Gender and Youth

Certain groups, such as female and young rural workers, are widely reported to be disadvantaged in labor markets and employment in Africa; some assertions have been refuted, others not. For example, there is little evidence of female dominance of the rural and agricultural labor force in Africa. Using individual plot-level data from six countries, Palacios-Lopez et al. (2017) document that women provide on average only 40% of the total labor (including self- and wage employment) in agriculture. Yet, Baffour & Quartey (2016) point out that rural women in Ghana have a higher likelihood than men to be in time-related and income-related underemployment, implying that employed women work fewer hours in productive income-generating jobs and generate lower incomes than employed men. There is also ample evidence for gender gaps in agricultural labor productivity and lower productivity on female- versus male-managed plots from various (mostly Eastern African) countries (e.g., Ali et al. 2016, Campos et al. 2016, Croppenstedt et al. 2013, Gebre et al. 2021, Kilic et al. 2015, Mugisha et al. 2019, Nchanji et al. 2021, Oseni et al. 2015, Slavchesvska 2015, Smale et al. 2019). These gender gaps in productivity are usually attributed to factors such as education, crop choice, land rights and quality, access to inputs, credit, family

labor, technology, and extension services and not to an intrinsic lower productivity of female labor. Studies point to similar gender gaps in rural nonfarm sectors, with evidence of lower labor productivity in female-managed nonfarm enterprises (Nagler & Naudé 2017, Rijkers and Costa 2012). In almost all African countries there is also a gender wage gap, averaging 16% across countries and rural and urban areas (ILO 2019). This is confirmed by various country- and sector-specific studies (e.g., Bigler et al. 2017; Fabry et al. 2022a,b; Oduol et al. 2017; Schwidrowski et al. 2021).

The assertions of a huge youth unemployment problem are also largely refuted in the literature. While there is a large share of youth[10] in the total population in Africa (IFAD 2019, Mabiso & Benfica 2019, Maiga et al. 2015), the estimated youth employment rate is 61%, which is higher than in Asia (39%) and Latin America (48%) (Dolislager et al. 2021). Some countries in Northern and Southern Africa, including South Africa and Namibia, have particularly high youth unemployment rates, but in most countries youth unemployment is low (Fox et al. 2016, Sumberg et al. 2021). Yet, there is substantial underemployment among Africa's rural youth (Bezu & Holden 2014, Carreras et al. 2020, Fox et al. 2016). Elder et al. (2015) estimate, from data from eight African countries, that on average 7.5% of the youth labor force is unemployed and that more than one-third of young rural workers work fewer than 20 hours per week. Contrary to the gender productivity gap, young workers are often ascribed a higher labor productivity because they innovate more rapidly and are better informed and digitally connected, but there is little evidence for this (Mabiso & Benfica 2019, Mueller & Thurlow 2019, Sumberg & Hunt 2019).

Farming remains the dominant employment sector for rural youth, refuting the idea of a large outflow of youth labor from agriculture[11] (Heckert et al. 2021, ILO 2019, Mabiso & Benfica 2019, Maiga et al. 2015). Most rural youth workers are farming in informal self-employment, but estimates of this share vary between 40% and 80% across countries and studies (Abay et al. 2021, Elder et al. 2015, Fox et al. 2016, Yeboah & Jayne 2018). The engagement in off-farm wage employment and nonfarm self-employment increases with the age of young workers and peaks around the age of 30 (Abay et al. 2021). Related to this, there is ample evidence from various countries (but again mostly from Eastern Africa) that rural women and youth have a lower likelihood of engaging in nonagricultural employment, off-farm wage employment, and nonfarm self-employment than do rural men and elderly workers, respectively (e.g., McCullough 2017, Nix et al. 2016, Van den Broeck & Kilic 2019). Yet, in some countries women are observed to be more likely to engage in off-farm employment, e.g., in Ghana (Ackah 2013) and Nigeria (Van den Broeck & Kilic 2019). Some specific export-oriented agro-industry sectors in Senegal, Ghana, and Kenya are reported to be particularly inclusive toward women, young workers, and/or migrants (Krumbiegel et al. 2020, Maertens & Swinnen 2012, Oduol et al. 2017). A substantial share of rural youth (in some countries up to 20% in full-time equivalents) works in the off-farm segment of the agri-food system (Dolislager et al. 2021, Yeboah & Jayne 2018).

Some studies on decent work and job satisfaction include a gender and/or youth perspective. Female wage workers in commodity value chains in Kenya have poorer working conditions and less job security than male workers (Oduol et al. 2017). Fabry et al. (2022a,b) indicate that female wage employees in horticultural export companies in Senegal face worse conditions for multiple dimensions of decent work than male workers, and youth and migrant workers are found to be

[10]Youth is usually defined as the age category 15 to 24. Some studies use a broader age range of 15 to 28 or even 34 or distinguish between youth (15 to 24) and young adults (25 to 34). Varying definitions of youth complicate a comparison across studies.

[11]Perceptions of widespread disinterest by Africa's youth in agriculture are misleading, as these are usually based on dichotomic preference scenarios (taking or leaving agriculture), leaving out the possibility of (often preferred) mixed livelihood strategies (LaRue et al. 2021).

less likely to have a decent job in this sector. Despite lower wages and poorer working conditions, women are observed to have higher job satisfaction (Fabry et al. 2022b)—an association that is referred to in the literature as the gender job satisfaction paradox and ascribed to self-selection and differences in expectations.

5.3. Remoteness

Rural areas vary substantially in terms of connectivity and agro-ecological potential, with Africa's rural population spatially clustered in areas with high soil quality (Jayne et al. 2014). It is commonly assumed that employment opportunities and poverty are worse in remote settings with poor agro-ecological potential, the so-called lagging regions. Emerging evidence, however, suggests that poverty rates in Africa are higher in areas with high- than low-agro-ecological potential. Poverty rates in high-potential areas increase the more remote they are, but in low-potential areas, they remain similar or even decline with remoteness (Christiaensen & Vandercasteelen 2019, Wantchekon & Stanig 2016). Moreover, the number of poor people in poorly connected high-agro-ecological-potential areas far outstrip those in poorly connected low-agro-ecological-potential ones (Christiaensen & Vandercasteelen 2019). This also holds for youth (IFAD 2019).[12]

The mechanism behind these findings remains poorly understood. High-agro-potential areas may have attracted more people, inducing higher population density. If not followed by commensurate agricultural intensification, stagnation and impoverishment ensue. Overall, the practice of fallow has virtually disappeared in Africa, but the adoption of soil fertility–enhancing inputs (organic and inorganic) has lagged, with widespread soil and environmental degradation now commonly observed (Binswanger-Mkhize & Savastano 2017, Jayne et al. 2014). Remoteness exacerbates this situation, making it even harder to intensify agricultural production, diversify outside agriculture, or move (Davis et al. 2017). Historically, much of Africa's road infrastructure has been constructed to connect mining areas to cities and seaports, thereby bypassing some of the areas with the greatest agro-ecological potential. This legacy persists in the spatial distribution of Africa's current road network (Wantchekon & Stanig 2016).

Limited employment opportunities in low-agro-ecological-potential areas remain one challenge among many to prevent rising interregional inequality and conflict. Yet, the findings in the literature draw attention to more remote high-agricultural-potential areas with high population density as key entry points for productive employment generation and poverty reduction, with an emphasis on rural infrastructure and transport services, agricultural services (including for smallholder livestock promotion), and schooling.

6. SOME RESEARCH GAPS AND EMERGING ISSUES

First, while the empirical literature on rural employment in Africa has been growing rapidly in the last decade, there seems to be a bias in this literature toward Southern and especially Eastern Africa. This bias likely relates to data limitations. In many cross-country studies using Living Standards Measurement Study (LSMS) data, more than half (sometimes all) of the included countries are in Eastern Africa. There are important regional differences in rural employment trends, however, with Western Africa showing quite different trends than Eastern Africa. Evidence from Western and Central Africa, except for a couple of countries such as Ghana and Senegal, is still thin. Generalizing from the currently available empirical evidence is therefore still difficult and calls for caution.

[12] Nearly half of all rural youth worldwide live in poorly connected high-potential areas, with the concentration even larger in Sub-Saharan Africa (IFAD 2019).

Second, a crucial question emerging from the literature is the potential trade-off between the quantity and quality of rural employment. This question relates to identifying policy priorities in terms of fostering full employment versus fostering more productive and decent employment. Although market forces might not increase wages and improve employment conditions during early stages of agricultural and rural development, the decent work agenda is brought along through global value chains and international pressure on governments for labor market regulations. There are clear signs that private standards and corporate codes of conduct improve working conditions in general, but there is very little evidence whether this comes at the expense of employment creation. Incipient evidence shows that in South Africa the introduction and increase of minimum wages have an adverse effect on employment in agricultural and nonagricultural sectors (Bhorat et al. 2013, 2014, 2017; Habanabakize et al. 2019; Nattrass & Seekings 2018). Studies are needed that examine and quantify the trade-off between the quantity and quality of employment in Africa, where large increases in the (rural) labor force are still expected.

Third, although the rural-urban dichotomic approach is conceptually powerful and practically convenient given the data available, it insufficiently acknowledges the interdependency of rural and urban areas. This is often strongest at their interface, making peri-urban areas particularly interesting and distinct. Migration to peri-urban areas contributes substantially to the transition from low- to more-productive jobs in Tanzania, for example (Mueller et al. 2019). Yet, standard rural-urban analysis masks this prominent phenomenon of rural to peri-urban (rather than rural to urban) migration. But this is just one example of rural-urban interaction and spatial contiguity. The newly developed global spatial data set of Cattaneo et al. (2021b) opens new opportunities to examine employment and mobility patterns along the rural-urban continuum and urban hierarchy. The authors categorize the global population based on their travel time from urban centers of different sizes, yielding a series of urban-rural catchment areas by city size. This allows, for example, exploring the extent of urban-rural employment spillovers in the hinterlands and how they vary by distance and city size. Are urban centers more likely to cause rural stagnation or so-called backwash by draining (skilled) workers and financial capital from rural areas or are they more likely to create employment opportunities or spread by generating demand for rurally produced goods and services? How far does the urban influence stretch and how does it vary by city size? Cattaneo et al. (2021a) provide a good initial discussion on how the data could be used to analyze these and other rural-urban interactions and how employment and other socioeconomic outcomes evolve across the rural-urban continuum.

Fourth, the globally ongoing digitization, reinforced by the COVID-19 pandemic, can fundamentally transform the agri-food system. Unlike prior agricultural revolutions that began with on-farm innovations (e.g., the British and Green Revolutions), digital technologies are likely not labor intensive and promote innovations at multiple points along the agri-food value chain. By reducing information asymmetry and transaction costs and facilitating the capture of economies of scale, they can bring agricultural advisory, credit, and insurance as well as machinery services within the reach of smallholders, while improving access to output markets and facilitating quality upgrading and value chain development. Digitization is most advanced in the provisions of advisory services (e-extension), in financial services (e-wallet), and in supply chain management (Tsan et al. 2019). The multitude of seemingly small changes in transaction costs (to get credit, to sell one's good, to verify quality) could increase the profitability of smallholder farms and small-sized enterprises in the agri-food midstream. But digitization also entails risks, including the risk of market concentration and limited inclusion, if not complemented with support measures such as the rural expansion of internet access, digital skill development, and effective antitrust regulation (Kim et al. 2020). Evidence of the impact of possible disruptive digital applications on rural employment outcomes has remained scarce, partly because of the nascent nature of these

innovations. Given its transformational potential, digitization of the agri-food system sets an important agenda for action learning and rigorous evidence building.

Fifth, there is increased attention for green, resilient, and inclusive development (GRID), which calls for strategies that promote economic growth and employment that goes hand in hand with environmental goals and social inclusion (World Bank 2021). The implications for employment generation in rural Africa are unclear. A transition to sustainable agriculture by 2030 through the adoption of conservation agriculture in developing countries and organic agriculture in developed countries is, for example, simulated to reduce employment in agriculture worldwide by about 2%, with losses concentrated in Africa (−3.5% or over 20 million fewer jobs) and Asia and the Pacific (−2.2% or 100 million fewer jobs) (ILO 2018). These results follow largely from the hypothesis of lower labor requirements of conservation agriculture implemented in areas where agricultural labor shares are still high. Similarly, more sustainable use of natural resources (forests, parks, and oceans) may create better and more sustainable jobs, but likely also fewer of them. To accelerate the transition from jobs and production processes that are either low productive or bad for the environment to jobs that are high productive and environmentally sustainable, better articulation and quantification of the impacts of green policies on rural labor markets, mechanisms to overcome the time lags between green investments and returns, and effective ways to compensate the losers are needed.

Finally, much is expected from the African Continental Free Trade Area. Intra-African trade liberalization is calculated to increase employment opportunities and wages for unskilled workers and help close the gender wage gap (World Bank 2020). The continent would see a net increase in the proportion of workers in energy-intensive manufacturing. Agricultural employment would increase in 60% of countries, and wages for unskilled labor would grow faster where there is an expansion in agricultural employment. By 2035, wages for unskilled labor would be 10.3% higher than the baseline, and those for skilled workers would be 9.8% higher. Wages would also grow slightly faster for women than for men (10.5% versus 9.9%) as output expands in key female labor–intensive industries. These are promising trends, though the effects for rural employment deserve further attention. The evolution of job outcomes in border cities and towns and their hinterlands, where most of the effects of the trade liberalization in the East African community were felt (Eberhard-Ruiz & Moradi 2019), deserves particular attention.

7. CONCLUDING REMARKS

The identification of policy areas for good job creation is often grounded in a comparison of (labor) productivity or earnings across sectors (agriculture versus nonagriculture), production modalities (small versus large firms), products (low versus high value added), and localities (towns versus cities). Large productivity gaps are then typically motivation for a policy focus on fostering the sector, modality, product, or location with the largest productivity and on removing barriers to factor mobility from one activity to the other. Although this is appealing at first sight, such a conclusion might be premature. First, raw productivity gaps often hide confounding factors such as measurement error and unobserved heterogeneity or largely disappear when changing the metric (e.g., per hour instead of per person).

Second, the focus on labor productivity, wages, and job quality ignores the size or quantity effect. Small labor productivity or wage increases benefiting a large share of the population may generate more good jobs in the aggregate than large productivity increases. In addition, such small productivity increases may create jobs that are more accessible for the poor and less educated than jobs in high-productivity sectors. The larger contribution of town migrants versus city migrants to growth, productive employment, and poverty reduction is telling (Christiaensen et al. 2013).

Unless supported by export demand, good jobs can only expand when supported by broader-based domestic income growth to support the demand for the goods and services produced by these jobs, which is likely to be rather income elastic. Good jobs are jobs that are productive, but not necessarily the most productive (Rodrik 2021). And good job policies need to be consistent with skill endowments and promote appropriate technologies. Labor-intensive manufacturing export expansion in Africa is limited, as robotization in the developed world rapidly reduces the cost of capital-intensive manufacturing, which implies that jobs need to be responsive to domestic demand patterns. Nayyar et al. (2021) review the scope and policy directions for a services-driven development model.

Third, the dynamic or spillover effects are often more important than the static gains. For example, agricultural growth often induces larger spillover effects, through expenditure linkages, than nonagricultural growth, giving it an advantage over nonagricultural growth in stimulating broad-based income growth and poverty reduction (Christiaensen et al. 2011, Ligon & Sadoulet 2018, World Bank 2008). Similarly, if larger and more productive smallholder farms (5–10 hectares) confer the most employment benefits on the immediate environment (Chamberlin & Jayne 2020), it may be productivity growth in smallholder agriculture that is most beneficial for rural employment, rather than investment in large farms with fewer but potentially better jobs.

Despite important differences across and within countries, staple crop productivity in many African countries is still predominantly low, and rural off-farm activities are limited. Many African countries still find themselves rather early on in the agricultural and rural transformation. Given smaller productivity gaps than commonly observed, greater size effects, and larger spillovers, the evidence reviewed supports a complementary policy and investment focus on agriculture and the rural off-farm economy to broker the transition to more productive rural employment. The key policy questions then become how best to invest in the agri-food system (on the farm and increasingly also off the farm) and how best to generate demand for nonagricultural goods and services that rural households can competitively produce.

Not all agricultural policies generate an equal number of good jobs, nor do all strategies to foster off-farm employment. To maximize more good rural employment generation, these subsectoral policy choices should similarly be guided by the productivity gains they generate per worker and by the number of workers gaining directly, together with the broader expected good job gains from spillover effects on the local economy. Barrett et al. (2021), Beegle & Christiaensen (2019), and IFAD (2019, 2021) make an important step in this direction, reviewing how different subsectoral policies perform in terms of gains per worker, the number of workers gaining, and potential spillovers as well as their joint effect on rural income growth and poverty. Yet, informing these policy choices continues to present a major research agenda, and the ongoing robotization and digitization, rising imperative of greening, and intra-African liberalization provide new opportunities and challenges.

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