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The challenges of rural youth employment in Africa:
a literature review



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Zaneta Kubik

Abstract

This paper provides a literature review on youth employment challenges in rural Africa. The rapidly changing demographic structure across the continent is expected to have important economic and social consequences, especially for employment. So far, despite sustained economic growth, African countries have not been successful in absorbing the fast-growing labor force, especially in the context of labor markets characterized by high levels of informality, underemployment and working poverty. As a consequence of life-cycle effects, relative to the measure of accumulated life experience; and generational effects, relative to the measure of the conditions prevailing during an individual's formative years, young people are exposed to several constraints in the labor market, including access to resources such as skills and innovation, finance and land. These challenges call for a comprehensive policy framework with complementary supply-side and demand-side interventions. Interventions that target girls and women can have particularly strong effects on their labor market outcomes.

Food systems are increasingly recognized as potential catalyst for employment creation, given their future prospects and labor-intensive nature. Farming and self-employment in the agri-food sector are the dominant categories of youth employment in rural areas of Africa, and the latter is growing especially fast, even though it remains much lower than farming in absolute terms. Despite common perceptions, food system jobs play a significant role in youth's aspirations. Close to 25% of young Africans want to work in the food and agriculture sector, and the share is higher in some countries, close to 40% in Kenya, Liberia, Malawi and Tanzania. Accordingly, the average age of African farmers is not rising – it is also much lower than previously claimed, at 34 years of age and not 60. However, youth aspirations remain conditional on several factors that can make food system jobs attractive, including technology, investment, market opportunities, and decent earnings. Policies should prioritize interventions that will raise labor productivity in food system, along with the broader labor-market interventions.

Keywords: youth, labor force, employment, food systems, agriculture

JEL codes: J13, J21, J22, J43, J48

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1 Introduction

Demographic pressure and the youth bulge have spurred much debate in Africa. With three quarters of population below the age of 35, Africa has the youngest population in the world. This is also the only region in the world where the youth population is projected to continue growing and will more than double by 2055 (UNDESA, 2019). Depending on the context in which the youth bulge occurs, and the opportunities and challenges that arise for youth's productive employment and personal development, the youth bulge could turn into a great opportunity, contributing to economic growth and structural transformation; or a great challenge, with implications for economic and social stability across the continent. In addition, the current conjuncture of climate, health and economic crises has cast a spotlight on the future prospects of young people and the growing concerns over intergenerational sustainability (HLPE, 2021).

While the potential economic and social consequences of the expected changes in the demographic structure of the African countries are multifaceted, the implications in terms of employment and local labor markets are particularly important. In Africa, the youth labor force almost doubled between 1990 and 2020, from 61.8 million to 115.8 million; and it is projected to have further grown by nearly 30 million and reached 144 million by 2030 (ILO, 2020). Considering the strenuous conditions in the local labor markets, characterized by high levels of informality, underemployment and working poverty, the projected influx of new entrants will put additional pressure on the already insufficient number of decent jobs. So far, despite sustained economic growth, especially over the last five years, labor markets in Africa have not been able to absorb the fast-growing labor force. The employment elasticity of growth has been low in Africa, with an estimated 0.41% increase in employment corresponding to a 1% increase in GDP (AfDB, 2019). Compared to other regions of the world, labor productivity remains low in Africa, which has also translated into declining real wages (ILO, 2020).

Compared to the adult population, youth is exposed to particular challenges in the labor market. At 63% in 2020, the share of young workers living in poverty is higher compared to adult workers, at 50%; and even though working poverty of the youth has been falling over the last two decades in Africa, it remains much above the levels observed in other regions of the world. Moreover, one in five of all young Africans have neither a job nor are they participating in education or training; and the vast majority of those not in employment, education or training (NEET) are young women (ILO, 2020). The particular youth challenges in the labor market are considered to stem from both life-cycle effects, i.e. relative to the measure of accumulated life experience; and generational effects, i.e. relative to the measure of the conditions prevailing during an individual's formative years.

In consequence, young people in Africa are exposed to specific barriers to entry into productive employment. These entry barriers are twofold: first, skills and qualifications, especially evidenced by skill mismatch; second, access to resources, mainly land and financial resources. For young people living in rural areas, these constraints are further exacerbated by the existing structural deficiencies of local economies and inadequacies in infrastructure and public service provision; various market imperfections tend to be amplified in remote and less connected areas. In line with the observed duality of labor markets in developing countries, rural labor markets also differ from the urban ones in that the majority of employment is concentrated in agriculture and food systems, and that informal and self-employment are prevailing forms of employment, while the formal wage-employment options are rare.

The challenge of youth employment has attracted a lot of attention among policy-makers and researchers. Creating productive employment and enabling environment for youth in Africa has come to the fore of the policy agendas in most countries. The Sustainable Development Goal (SDG) 8.6 specifically focuses on the promotion of youth employment, education and training. The African Youth Charter, adopted in 2006, was among the first instruments developed in Africa to provide a strategic framework for youth empowerment. The African Union (AU) Agenda 2063 also includes goals relative to youth employment. The year 2017 was nominated by the AU as the year of youth, with the objective

of harnessing the demographic dividend through investments in youth. The political commitment to the youth employment challenge is also reflected, directly or indirectly, in other strategic documents, either at the continental or country level (ILO, 2020). The research, too, has increasingly focused on youth, providing a growing evidence on various aspects of youth employment in Africa, but also other regions of the world.

This paper presents a literature review on the youth employment challenge in rural areas of Africa with the objective of addressing the question of how to productively engage rural youth. It proposes a conceptual framework to analyze the various aspects of youth employment, including determinants of labor market outcomes of youth and constraints which arise as a consequence of life-cycle and generational effects and which influence the spectrum of opportunities young people can choose from, especially when entering the labor market. The conceptual framework guides the literature review along selected thematic lines. In line with the focus of much of the available literature, emphasis is placed on employment of youth in food systems, considering its current and future prospects to create decent jobs in rural areas of Africa. However, acknowledging the increasingly complex livelihood strategies of rural youth, with evidence on pluri-locality and pluri-activity, the analysis also looks beyond food systems and rural areas and offers insights on mobility across space and between sectors of employment. Finally, the paper provides policy considerations, including the trade-offs and time-consistency aspects of required investments.

The remainder of this paper proceeds as follows. Section 2 presents the conceptual framework and method of the analysis; section 3 analyzes the macro-determinants of the youth labor markets in Africa; section 4 focuses on youth employment in food systems; section 5 discusses main constraints that young people face when entering labor markets. Finally, section 6 provides selected policy considerations and the last section concludes the review.

2 Conceptual framework and method

Youth can be defined as a period of transition from childhood and adolescence to adulthood, or from school to work. This is a particular period in an individual's lifetime, marked by the evolution of dependency relationships (Locke & te Lintelo, 2012; MacDonald, 2011) and transition to economic independence (Ansell, 2004). As such, youth is considered as a formative stage of life; the education and employment-related experiences accumulated at this stage affect the lifelong economic prospects and welfare of an individual (Filmer & Fox, 2014). For analytical purposes, youth, as well as childhood and adulthood as the remaining stages of life, are usually defined by chronological age (HLPE, 2021). The UN system defines youth as ages 15-24, and the AU as ages 15-35. However, the official definitions vary widely in national policies (Filmer & Fox, 2014; Arulingam et al., 2019). Moreover, even within the same framework, definitions of youth often overlap with definitions of childhood. In this context, some argue that childhood and youth should be considered in relative rather than absolute terms, and defined by their position in inter-generational relations and across the life cycle (Huijsmans, 2016; HLPE, 2021).

The conceptual framework in Figure 1 below is centered around the concept of transition between stages of life, i.e. childhood and adulthood, and, in more analytical terms, transition from school to work – the principal focus of this literature review. Conventional indicators of these transitions include completion of education, entry into employment, achievement of economic independence and family formation (Durham, 2017). It is important to acknowledge that although the transitions, as presented above, appear as linear movement between consecutive stages of life, their trajectories are often very diverse, complex and non-linear (Locke & te Lintelo, 2012).

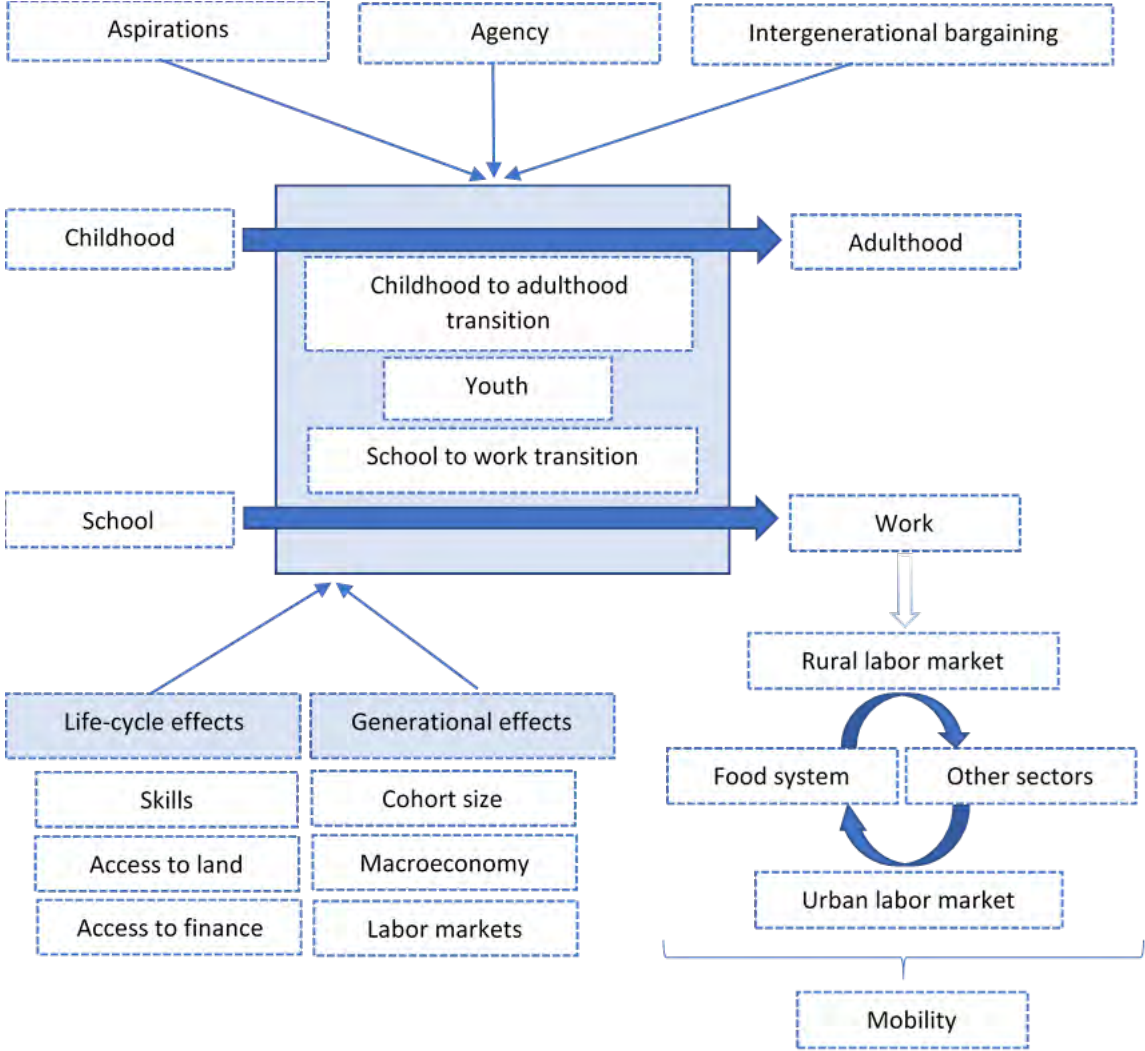
The trajectories of youth transitions depend on two types of effects: first, life-cycle effects, i.e. relative to the measure of accumulated life experience; and second, generational effects, i.e. relative to the measure of the conditions prevailing during an individual's formative years (Resnick & Thurlow, 2015; Glover & Sumberg, 2020). Life-cycle effects refer to factors that are intrinsic to youth as a stage of life, including socio-economic characteristics, such as lack of work experience or control over assets. Here, these effects are conceptualized in terms of limited access to resources, including knowledge and skills, land, and finance. On the other hand, the generational effects, which are specific to the given period of time do not concern youth exclusively; nevertheless, the intensity of their impacts might be particularly high for youth in confluence with the life-cycle effects. These effects are considered here in terms of the macro-determinants of the youth labor markets, including cohort size, macroeconomic context, and labor market trends, including entrepreneurship and mechanization and automation of work.

In addition, there exist complex and dynamic relationships between different stages of life and also, different generations. In this respect, youth transitions are the outcome not only of individual choices, but also aspirations, agency, and intergenerational power dynamics. Recent theoretical and empirical works show that occupational, educational, and income aspirations strongly determine individual efforts and decisions in terms of schooling (Ashraf, 2016; Favara, 2017; Tanguy et al., 2014), uptake of productivity-enhancing technologies and credit services (Bernard, Dercon & Taffesse, 2012; Mausch et al., 2018; Mekonnen & Gerber, 2016) and entrepreneurship (Langevang et al., 2012; Mgumia, 2017; Afutu-Kotey et al., 2017). Aspirations have often been conceptualized in the literature as expectations rooted in the reality (Leavy & Smith, 2010; Daum, 2018), or "opportunity spaces" (Sumberg et al., 2012), which are formed at the confluence of geographical, political, economic and cultural factors (Bossenbroek, van der Ploeg & Zwartveen, 2015).

How youth aspirations meet the reality is, along those contextual factors, also a question of agency and youth bargaining power within the household. In case of labor market outcomes, the labor allocation decision has been modelled in terms of utility maximization either at individual level, as in the Todaro model (Todaro, 1969), or at the household level, as in the Becker model (Becker, 1965). It

is therefore not clear to which extent livelihood choices of youths reflect their own aspirations as opposed to those of their families (Bezu & Holden, 2014).

Figure 1: Conceptual framework



Source: Author’s own elaboration.

The employment opportunities of the rural youth, especially in the context of rural Africa, can be divided into those within and outside of the food system. Food systems can be defined as “all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the output of these activities, including socio-economic and environmental outcomes” (HLPE, 2017). Here, the focus is strictly on youth employment in food systems, while other types of interactions of youth with the food systems, for instance via consumption behavior, is out of scope of the analysis. Within the food system, employment opportunities include farming as well as non-farm occupations in the downstream segments of the food value chains including food processing, marketing and retail, as well as food-related services.

While the importance of agriculture and food systems in the majority of African economies, especially in rural areas, makes the distinction of employment opportunities into within and outside of the food system useful for analytical purposes, it has recently been asserted that this is a false dichotomy given

the complexity of sectoral and spatial mobility patterns of the youth (HLPE, 2021). First, food systems and related employment extend beyond rural areas into towns and cities. Second, even within rural areas, the share of employment outside of the food systems is non-negligible; especially when secondary and tertiary activities are accounted for. Third, in line with the life-cycle effects, migration at young age to urban areas and out of agriculture does not necessarily need to be permanent, and a growing evidence on return migration suggests that it can also be conceptualized in terms of keeping options open before a full-time entrance into farming (Huijsmans et al., 2021). Fourth, even if migration is permanent, the linkages between mobility and food systems can remain strong, for instance via remittances used for productive investment in agriculture, or via seasonal labor migration to fill up labor shortages (HLPE, 2021).

Finally, although the focus of this literature review is on youth, youth outcomes cannot be analyzed in separation from childhood outcomes. The conditions prevailing during childhood, including health and nutrition, education, and economic shocks affect human capital and labor market outcomes as adults (Currie & Almond, 2011; McLeod & Kaiser, 2004; Currie & Thomas, 1999). Child labor, whether paid or unpaid, outside or within the household, as well as early marriage, affect human capital and occupational trajectories of individuals at later stages of life (Mussa et al., 2017; Mussa et al., 2018; Beegle, Dehejia & Gatti, 2009). These childhood-related aspects are therefore a necessary component of the framework in which to analyze youth employment. This is particularly relevant for designing policies which should encompass both short-term policies targeting current youth, but also long-term policies targeting those who will become future youths.

The conceptual framework presented above guides the analysis in this paper. The analysis is based on a literature review. The primary focus is on empirical studies published in peer-reviewed journals; however, since the academic literature on youth employment, especially in food systems, is nascent, grey literature is also included, provided that the publications contain information about the data and methods used. Search engines such as AgEcon and Google Scholar were used to identify relevant papers, which was then followed by the snowball method to find other publications. Guided by the conceptual framework, the resulting list of articles was reviewed based on their scope, data and methods, and sectors and countries of interest. With respect to the latter, while the main focus of the review is on the African countries, evidence from other regions of the world, especially from Asia which underwent similar demographic transition four-five decades ago (Resnick & Thurlow, 2015), is also used whenever lessons relevant for Africa can be drawn. Finally, to supplement the literature review, descriptive statistics based on the available secondary data are also included.

3 Macro-determinants of youth labor markets in Africa

3.1 Cohort size

Sub-Saharan Africa is expected to become the most populous region in the world by 2050, according to the recent projections; and to account for more than half of the growth of the world's population between 2019 and 2050, with an increase of more than one billion people over that period (UNDESA, 2019). Several countries, including Nigeria, DRC, Ethiopia and Tanzania, are among the countries with highest projected increase in population in absolute terms; while in relative terms, 18 countries in Sub-Saharan Africa are expected to double in size by 2050, with Niger even tripling in size (UNDESA, 2019). Sub-Saharan Africa is the only region where population is expected to continue growing throughout 2100, the latest point in population projections so far (UNDESA, 2019). These processes have straightforward implications for the region's age structure. With 62% of population below age 25 in 2019, Sub-Saharan Africa is the youngest region in the world. However, the share of population below age 25 has already started declining, albeit very slowly (Table 1).

The youth bulge, a common phenomenon in countries which have achieved a reduction in infant mortality but where fertility rate remains high, has therefore started receding in Sub-Saharan Africa (Thurlow, 2015). Instead, the adult working-age population (25 to 64) is the fastest growing population group in the region (UNDESA, 2019). The latter fact in particular creates potential for demographic dividend, that is a situation wherein the number of people in the workforce is higher than the number of dependents, and as such, presents opportunities for economic growth and structural transformation. Some authors consider, however, that the decline in fertility rates across Africa is too slow and might hamper the expected benefits from the demographic dividend (see Page, 2019). Nevertheless, while in absolute terms, the number of youths in Africa is very high and requires immediate policy action to create enabling environment for productive employment of current youths, the trends in relative terms suggest a slowly improving demographic structure on the continent.

Table 1: Youth (15 - 24 years) share of potential labor force (15+ years)

	Youth share (%)		Historical peak share	
	2019	2050	%	Year
World	21.0	17.4	29.7	1975
Developing countries	22.8	18.3	33.0	1975
Sub-Saharan Africa	34.4	28.2	36.0	2002
Eastern Africa	35.7	27.1	37.2	2004
Western Africa	34.6	29.6	35.8	2000
Middle Africa	35.5	30.3	36.1	2005
Southern Africa	24.3	19.3	33.0	1977
excluding South Africa	29.9	22.2	37.5	2000
Northern Africa and Western Asia	23.9	19.0	33.8	1978
Central and Southern Asia	25.2	17.3	32.8	1977
Eastern and Southeastern Asia	16.3	12.8	31.9	1973
Latin America and the Caribbean	22.0	14.8	33.5	1976

2050 projections based on the medium fertility variant. Potential labor force measured as the total population aged 15 years and older.

Source: Author's own elaboration using World Population Prospects 2019 data from UNDESA. Table adapted from Thurlow (2015) and updated using recent population data.

3.2 Macroeconomic context

While African economy has been challenged by the impacts of the Covid-19 pandemic, with the continent's GDP contracting by 2.1% in 2020, for the first time in half a century (AfDB, 2021), it is projected to have quickly rebounded in 2021. Even though the rather optimistic future projections might be a sign of resilience of the African economy, it remains nevertheless vulnerable to global and regional shocks, and exposed to a number of important external and internal risks, including climate change and extreme weather events, political instability and social tensions, financial market volatility and debt overhang. Moreover, the Covid-19 pandemic has had important socio-economic impacts, reversing the trends of poverty reduction, with an estimated 30.4 million Africans pushed into poverty in 2020 and up to 38.7 million in 2021 (AfDB, 2021), and labor markets have been one of the main channels of these impacts. While in the formal sector, the reductions in employment were relatively small (Apedo-Amah et al., 2020; Baumüller et al., 2021), the impacts were disproportionately large in the informal sector, the main employer on the continent (Nguimkeu & Okou, 2020).

However, even before the shock of the pandemic, the solid economic growth in Africa did not translate into improvements on the local labor markets. The employment elasticity of growth remains very low; for instance, over the period 2000-2014, a 1% increase in GDP was associated with 0.41% increase in employment, and as a result, employment grew by 1.8% annually, much below the rate of growth of the labor force, at 3% (AfDB, 2019). Economic growth, while necessary, is not sufficient to boost employment in Africa, especially considering the structure of the economy. This "jobless growth" can partly be explained by the small contribution of the manufacturing sector to GDP; and by the fact that in many countries, growth is driven by natural resource extraction which is not labor-intensive. The estimates suggest that historically, industry-driven growth acceleration episodes exhibited three times higher employment elasticities compared to service-driven growth acceleration episodes in Africa (AfDB, 2019). In addition, the segmented labor markets and the prevalence of informality further hinder the positive spillovers from economic growth to employment.

3.3 Labor markets

Labor is the critical asset of the poor. Creating opportunities to leverage this asset and generate a steady income stream is the most sustainable pathway out of poverty. Labor force participation rate in Africa, at 63.1% and employment-to-population ratio, at 58.8 in 2019 (ILO, 2020), are higher than the global averages. This can be explained by the presence of large working-age population (see above) on the one hand, and lack of formal social protection and insurance mechanisms on the other. Most individuals in low income countries simply cannot afford to be idle (Filmer & Fox, 2014). In the context where formal unemployment insurance is scarce or absent, and where state regulations are weak, the relevance of quantity adjustment, as measured by the official unemployment rate, is very limited.

Instead, the key element of labor market supply and demand adjustment is in terms of employment quality (Herrera & Merceron, 2013). Only youth from the top end of income distribution, who often also happen to be highly educated, can afford to queue for good jobs (Filmer & Fox, 2014; Stampini & Verdier-Chouchane, 2011), whereas those who are too poor to withstand long unemployment spells have to either work at family farms or household enterprises or create their own jobs. In Sub-Saharan Africa, just 16% of work is in wage employment, divided roughly equally between public and private sector, with the former declining after the 1980s and 1990s reforms, with the exception of resource-rich countries (Filmer & Fox, 2014; Sumberg et al., 2012). The remaining 62% of population works in agriculture and 22% in household enterprises (Filmer & Fox, 2014), both identified as mainly informal sectors.

These sectors usually fall into the category of vulnerable employment, i.e. own-account and contributing family workers. In Sub-Saharan Africa, the problem of vulnerable employment affects around three-quarters of the employed population; and an estimated 70% of salaried workers in Sub-Saharan Africa do not have social protection (ILO, 2016). Informality, lack of contracts and social

security as well as poor working conditions are major issues even in cases of much of wage employment. Working poverty prevails. In 2018, 33% of workers in Africa lived in extreme poverty, and 22% in moderate poverty, despite having a job (ILO, 2019). Finally, the persistent market segmentation might inhibit optimal labor allocation, from the perspective of human capital, especially in rural areas. This evidence clearly indicates that in Africa, lack of adequate employment opportunities – which involve productive work and offer decent earnings, job security and social protection, among others – continues to be one of the principal challenges hindering poverty reduction efforts.

3.4 Entrepreneurship

Much of the earlier debate on labor markets in Africa focused on “efforts to expand formal wage employment opportunities and to promote structural transformation, out of lower productivity, subsistence agricultural activities into higher value-added employment in the services and industrial sectors” (ILO, 2014). This approach was later criticized as being too narrow to accommodate the rapidly growing working-age population in Sub-Saharan Africa. Projections suggest that over the next decade, more jobs will be created in household enterprises, i.e. around 45% of new jobs, particularly in self-employment (Fox & Thomas, 2016), rather than in wage employment. It is now recognized that self-employment, and, in particular, entrepreneurship – even though the definition of the latter and the distinction between the two remain unclear – can be the solution for the youth employment problem (AU, 2020).

Conceptually, the idea of entrepreneurship as a driving force of structural transformation and employment creation seems very attractive. For instance, Gries and Naudé (2010) propose an endogenous growth model with micro-economic foundations where entrepreneurs provide several roles in the economy: (i) create new firms outside of the household, (ii) absorb surplus labor from the traditional sector, (iii) provide innovative intermediate inputs to final goods producing firms, (iv) foster greater specialization in manufacturing, and ultimately (v) raise productivity and employment in both the modern and traditional sectors. Hausmann and Rodrik (2003) show that entrepreneurs provide technological externalities in bringing new goods to market, which also has information externalities and signaling function. However, the empirical evidence on the role of entrepreneurship in economic development is inconclusive and concerned with the micro-macro paradox (Hessels & Naudé, 2017), whereby firm-level studies show positive impacts of entrepreneurship in terms of job creation, investment, and technological progress, but where macro-level studies fail to show any positive relationship between entrepreneurship and economic growth (Gollin, 2008; Sautet, 2013).

Despite lack of clear evidence on entrepreneurship and, also, related policies targeting entrepreneurs (see, for example, Blattman, Dercon & Franklin, 2019; Fafchamps et al., 2014; Cho & Honorati, 2014), self-employment and entrepreneurship remain important in the debate on youth employment in Africa where youth cannot afford to queue for wage jobs, but instead have to create jobs for themselves (Filmer & Fox, 2014). In the short run, the biggest challenge is therefore to raise productivity of those self-employed, mainly in the informal sector. However, identifying self-employment with bad jobs might be misleading as there exists important heterogeneity of household enterprises (Teal, 2016; Fox & Sohnesen, 2012), in line with the informal sector’s internal dualism and the two-tier distribution of jobs (Fields, 2009). Falco et al. (2011) show that size of the enterprise matters for the economic outcomes, including earnings. Although very often, informal enterprises are operated at such small scale that they turn out inefficient and become a poverty trap for the households (Banerjee & Duflo, 2007), larger enterprises, especially the ones with employees, offer earnings comparable or even higher than (some forms of) wage employment, irrespective of whether skills are controlled for or not (Teal, 2016; Kerr & Teal, 2015).

3.5 Mechanization and automation

Mechanization and automation in agriculture and industry also have the potential to shape labor markets in Africa. The empirical evidence for Africa is scarce, and has focused so far on mechanization in agriculture. Agricultural mechanization is seen as a way to increase labor productivity (Diao, McMillan & Mwangwe, 2018), in line with the theory of induced innovation (Hayami & Ruttan, 1985). Despite efforts to promote mechanization in agriculture first in the 1960s and 1970s (Pingali, 2007), and later after the 2008 food price crisis (FAO & UNIDO, 2008; Kienzle, Ashburner, & Sims, 2013; Mrema, Baker, & Kahan, 2008), food systems in Africa remain the least mechanized in the world (Pingali, 2007; Sheahan & Barrett, 2017); and governance challenges have been put forward as one of the explanations for these failed efforts (Daum & Birner, 2017). However, the recently emerging literature on the impacts of agricultural mechanization suggests that, along with increasing farmers' own income, mechanization can also increase the demand for hired labor when it leads to the expansion of cultivated land and when family labor is replaced with hired labor (Adu-Baffour, Daum & Birner, 2018). Similar findings emerge from other regions (Rajkhowa & Kubik, 2021).

On the other hand, the evidence on automation in Africa is largely unavailable, admittedly due to the low levels of industrialization and limited development of manufacturing across the continent. However, the emerging evidence from high-income or other developing regions of the world has spurred debate regarding the future impacts of automation in Africa as well (Kenny, 2019), to the extent that experiences from America or Asia are transferable to Africa. The available projections suggest that 47% of jobs in the US will be automatable within the next two decades, and that the share is even higher in developing economies (Frey & Osborne, 2017). Low-skilled workers in particular are at risk: Arntz, Gregory and Zierhan (2016) estimate that in the OECD countries, more than 50% of workers with primary (or lower) education, and 40% of those with lower secondary education are at risk of losing jobs to automation. Considering the concentration of employment in low-skilled jobs, demographic pressure and the already insufficient number of good jobs, such forecasts can be bad news for Africa (Kenny, 2019). Automation in manufacturing might also reverse the trends of locating low-skilled manufacturing and services in developing countries (ibid.). Irrespective of the future prospects, the production system of the fragmented global value chains has already been changing over recent years, with a declining job intensity of exports (Rodrik, 2018).

At the same time, the accuracy of these forecasts is highly debatable, especially that history has seen many episodes of such increased concerns with the impact of labor-saving technology – but so far, “the past two centuries of automation and technological progress has not made labor obsolete” (Autor, 2015). Autor (2015) suggests that while automation indeed substitutes for labor, it also complements labor, raises output in ways that lead to higher demand for labor, and interacts with adjustments in labor supply. Accordingly, in the case of Africa, Kenny (2019) argues that automation will be vital for development, productivity enhancement and creation of new jobs. The ongoing ICT revolution in particular might present new opportunities for the African youth. In this context, the demand for workers with specialized skillsets is expected to increase, and therefore it is necessary that education systems, including vocational training, adjust their curricula accordingly (HLPE, 2021).

4 Youth employment in food systems

4.1 Food systems and their potential

In this broader context, the potential of the food system to create jobs in Africa has been increasingly put forward in the literature (Allen et al., 2016; Townsend et al., 2017; Kubik et al., 2021). The African food market is projected to triple and reach US\$ 1 trillion by 2030 (WB, 2013), with the prospect of making agriculture and agribusiness a catalyst for development and poverty reduction. Growing food demand as well as food system transformation, both a consequence of rising per capita incomes, urbanization and new export opportunities, are expected to result in a shift of production from cereals to high value fresh, processed and convenience foods (ibid.). These changes in production patterns and related technologies will entail a higher level of food management and transformation beyond the farm, requiring major investments in processing, logistics, market infrastructure, and retail networks. The World Bank (WB) predicts that the most dynamic sectors are likely to be rice, feed grains, poultry, dairy, vegetable oils, horticulture and processed foods to supply domestic markets (WB, 2013).

Allen et al. (2016) emphasize that local food demand will shape employment patterns in the food system to a greater extent as compared to exports which will contribute to employment growth only in particular circumstances, especially for better-off farmers and agribusinesses, as is the case of, for example, horticulture in Kenya. Typically, perishable and processed foods for local markets require much value added, especially in the form of processing and packaging, as well as other services along the value chain, and their production is therefore highly labor-intensive. There is also a growing evidence of the role of local processing enterprises in supplying urban markets in Sub-Saharan Africa, where local firms dominate a range of product categories, be it in terms of number of products or number of firms (Ijumba et al., 2015; Snyder et al., 2015). Furthermore, contrary to popular perceptions, locally processed foods are widely present not only in traditional outlets, but also in modern retail chains (Allen et al., 2016).

A number of important constraints exist that might inhibit food systems from reaching their full potential. African agriculture still performs below its capacity, mainly as a result of insufficient investment, institutional and governance deficiencies, and lack of supportive hard and soft infrastructures (ZEF & Akademiya2063, 2020). In consequence, the development of agro-industries is hampered by poor vertical coordination with domestic farming and a limited ability of local farmers to consistently procure reliable quality raw materials. Many of the most dynamic agro-industries therefore still rely on raw material imports, especially in West Africa (Hollinger & Staatz, 2015). Earlier literature suggested that this situation contributed to a highly dualistic character of the agro-processing sector with a limited number of medium and large enterprises and a large number of small and micro operators, mostly in the informal sector – but without small and medium enterprises (SMEs) – “the missing middle” (Hollinger & Staatz, 2015; Dinh et al., 2012). However, more recent literature has provided evidence of rapid proliferation of SMEs in food systems across Africa (Reardon et al., 2019).

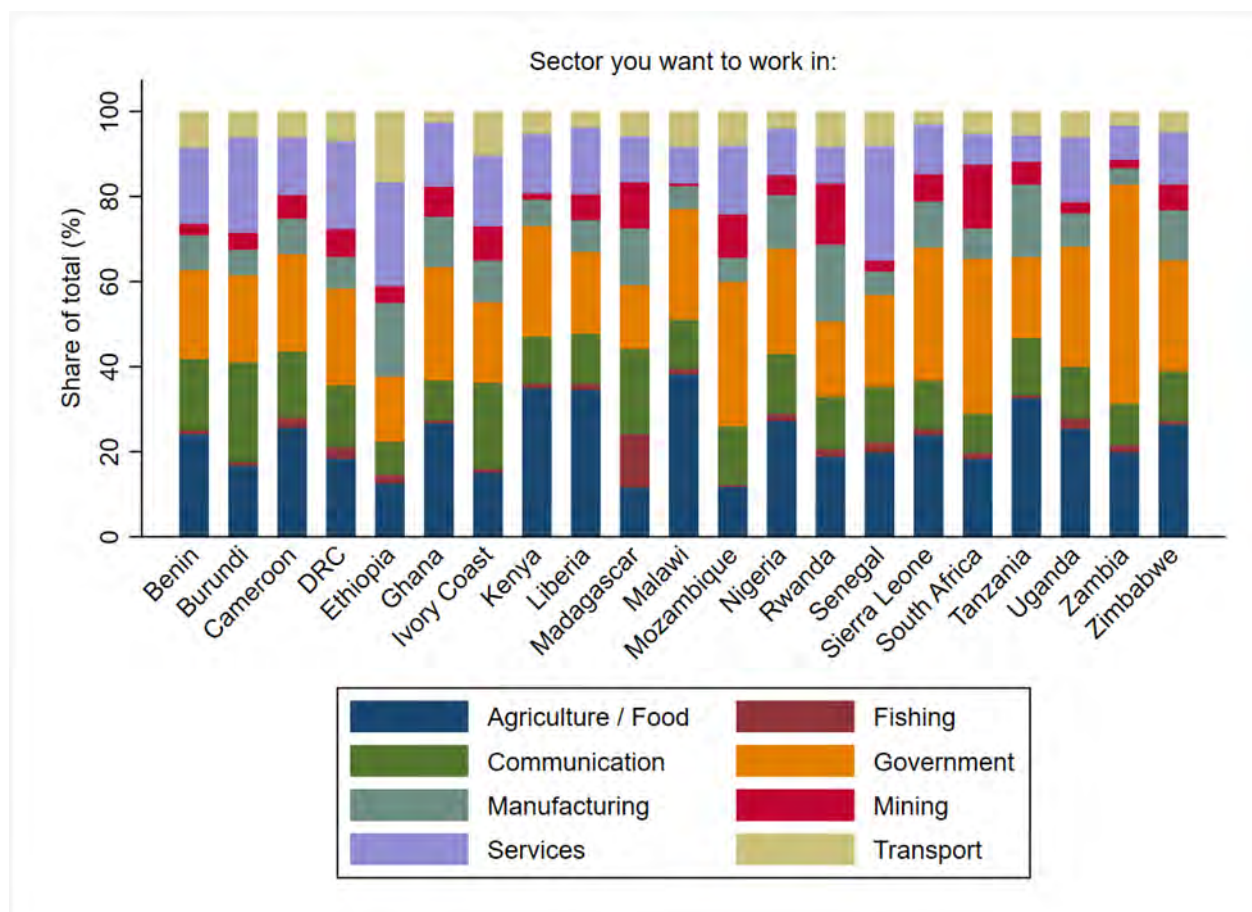
4.2 Food systems in youth aspirations

There is a common perception that youth are not interested in working in agriculture and food systems; and this perception is also supported by available evidence (Bezu & Holden, 2014; Maiga et al., 2015; Kosec et al., 2017; McCune et al., 2017). Leavy and Hossein (2014) call it a “generational break” whereby agriculture does not appear to be what the rural youth aspire to, despite the role it plays in local livelihoods. This apparent decline in interest in agriculture is influenced by the perceptions that young people have about agricultural work – as characterized by drudgery, exposure to shocks, low social status and poverty (Leavy & Hossein, 2014; Sruthi, Jayalal & Gopal, 2016). Structural barriers, and in particular lack of access to land, markets, capital and knowledge, are also prominent in shaping youth’s aspirations related to agriculture (Bezu & Holden, 2014; Kosec et al.,

2017; Žmija et al., 2020). Young women in particular are discouraged from agricultural activities (Elias et al., 2018), potentially due to the gender-specific entry barriers.

These findings are corroborated by the data from a sms-survey covering 10,000 individuals between 18 and 35 years old from rural areas in 21 countries in Sub-Saharan Africa (henceforth sms-survey), which shows that among the most important job attributes, youth consider good wages (38% of respondents) and good working conditions (37.5%) as the most crucial. This is, to a great extent, in line with evidence from 32 countries in Africa, Asia, Europe, Latin America and the Caribbean suggesting that the majority of youth across all levels of education aspire to public-sector employment and high-skilled occupations; and that the most important factors are job security, formality and earnings (OECD, 2017). Finally, the sms-survey data shows that good quality of life is indicated by 8% of respondents as the most important job attribute; and this is also in line with Leavy and Hossein (2014) and White (2012) who point out that lack of interest in agriculture is often related to the low quality of life and lack of infrastructure in rural areas. Based on the same sms-survey, Melchers and Büchler (2017) list main factors which would make rural areas more attractive among rural youth: improvements to employment, education, technology, infrastructure, electricity and water, and support for agriculture.

Figure 2: Rural youth employment aspirations in selected countries in Africa



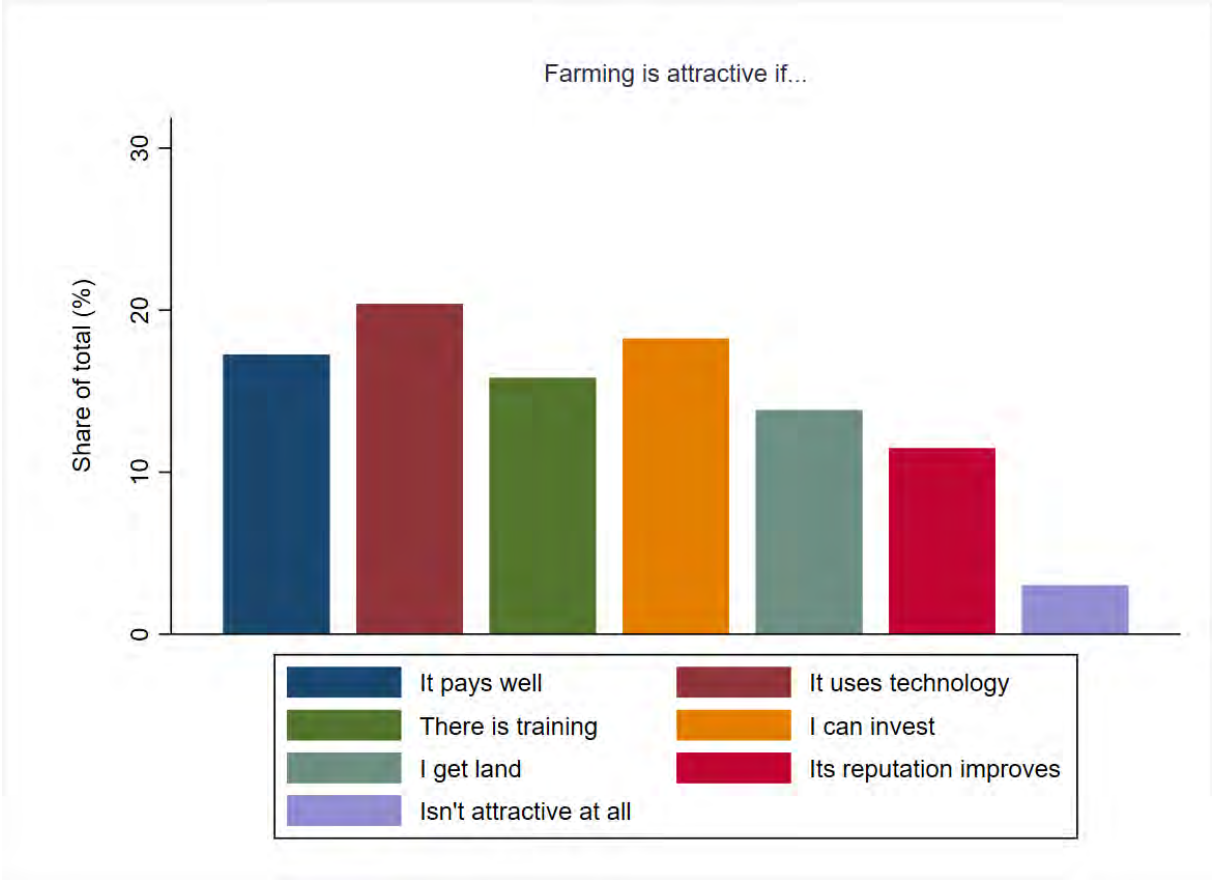
Source: ZEF and Akademiya2063 (2020) based on the GeoPoll dataset.

Against the evidence of youth losing interest in agriculture and food systems as potential career options, the sms-survey data shows that agriculture still occupies a prominent place in youth's employment aspirations. Overall, close to 25% of young Africans want to work in the food and

agriculture sector, but the share is higher in some countries, close to 40% in Kenya, Liberia, Malawi and Tanzania (Figure 2). The highest share of respondents, more than a third, want to work in services, communication and transport; and a quarter in the public sector. These figures, combined with relatively low importance of manufacturing, are in line with the discussion on structural transformation without industrialization (Gollin, 2018). Finally, LaRue et al. (2021) suggest that youth employment aspirations should be considered in the framework of complex livelihoods involving pluri-activity rather than a dichotomic choice between agricultural vs. non-agricultural jobs.

Moreover, other studies suggest that rather than having no aspirations to work in agriculture at all, these aspirations are conditional on selected factors, for instance availability of land or inputs, commercialization of agricultural activities, or combination of agriculture with other income-generating activities (White, 2020). Agriculture is also considered a viable option if it involves modern technology (Elias et al., 2018), or when it is perceived as a form of entrepreneurship – or agripreneurship for that matter (Bossenbroek, van der Ploeg & Zwarteveen, 2015; Mwaura, 2017). In this context, the role of education in changing perceptions about agriculture has been noted (Katz, 2004). This evidence is corroborated by the sms-survey data in Figure 3 which emphasizes the importance of technology, investment opportunities, and decent pay to make agriculture an attractive employment option. For 12% of respondents, the inadequate reputation of agriculture is a deciding factor. Only 3% of respondents consider that agriculture is not attractive at all. The results are broadly similar across female and male respondents.

Figure 3: Factors that make farming attractive according to rural youth in Africa

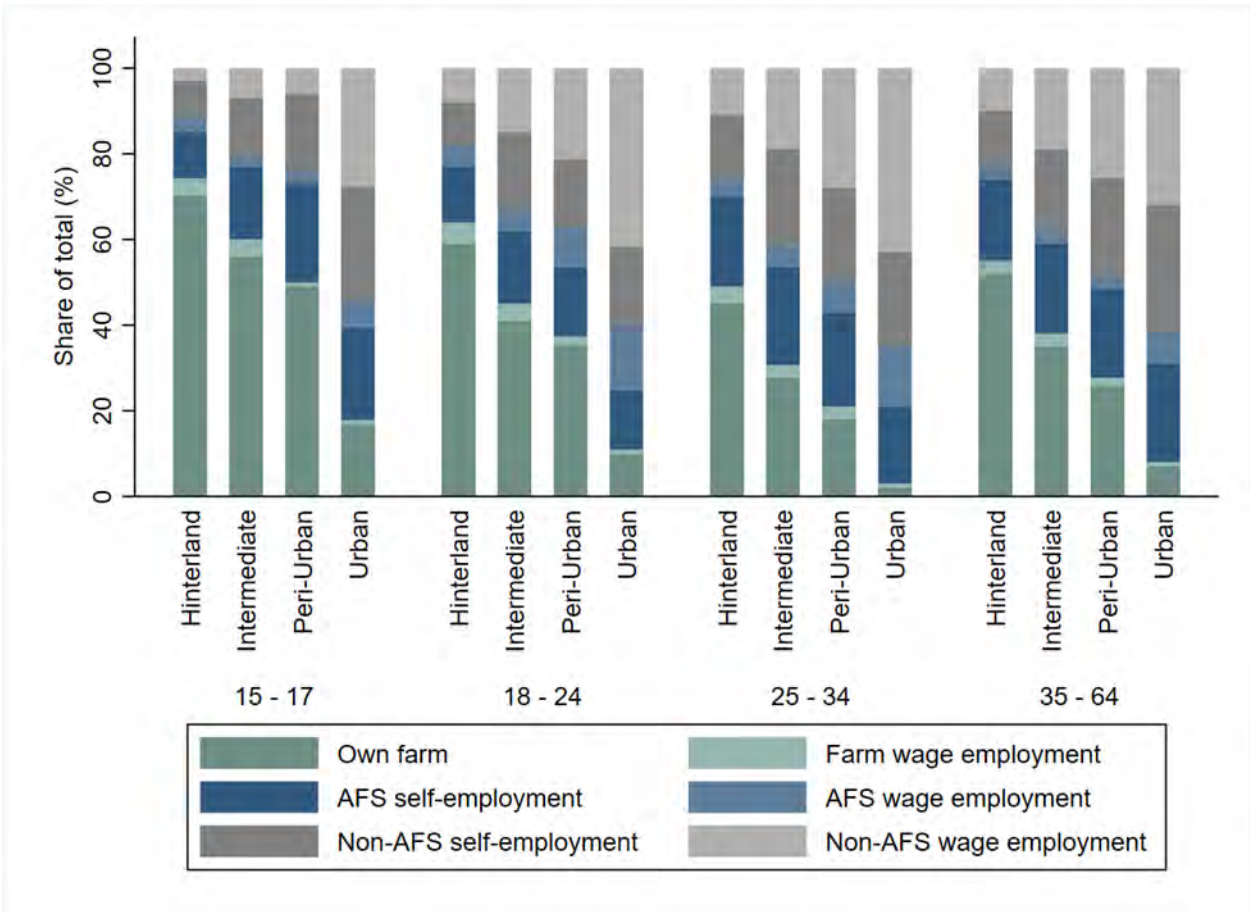


Source: Author’s own elaboration based on the Geopoll dataset. Multiple answers allowed.

4.3 Status of youth employment in food systems

The food system is the dominant employer in Sub-Saharan Africa. Irrespective of aspirations, the share of youth actually involved in food systems in Africa is high, especially when looking at the time spent in agriculture compared to other forms of income-generating activities (Dolislager et al., 2021). Figure 4 presents various categories of employment in food systems: own farm self-employment, farm wage employment, agri-food system wage employment and self-employment, and other sectors wage and self-employment. The results are presented for several age categories (adults are also included for comparison) and several categories of rural areas, depending on their remoteness, and urban areas. The participation of youth in farming their own land is observed to be relatively high, declining with youth age categories, and then increasing again for adults, i.e. exhibiting a J-curve shape. In line with expectations, participation in farming is highest in the most remote rural areas and declines for less remote areas and locations in proximity to towns. Self-employment in the agri-food sector turns out to be the second most important employment category in rural areas for all age categories, whereas for older age categories and in areas located closer to towns self- and wage employment in other sectors is most prevalent. This high degree of involvement in agriculture puts downward pressure on the age structure of the sectoral workforce. Contrary to popular perceptions, the average age of African farmers is not rising – it is either stagnating or even falling in some countries (Yeboah & Jane, 2018). It is also much lower than previously claimed – not 60 years (FAO, 2014), but 34, once all the household members involved in family farming are considered rather than only the household heads (Arslan, 2019).

Figure 4: Time allocation by category of employment (share of full-time equivalents)



Source: ZEF & Akademiya2063 (2020) based on figures from Dolislager et al. (2021). AFS: agrifood system.

In some countries, employment in the off-farm segments of the food system is non-negligible and considerably contributes to the total employment in manufacturing sector. In Malawi and Tanzania, food and beverages account for more than 40% of total manufacturing employment (Townsend et al., 2017). Allen et al. (2016) show that in terms of job creation, off-farm food system is growing much more rapidly in percentage terms than farming, but since the growth is from a very small base, in absolute terms, the contribution of off-farm food system employment to new jobs is still lower than that of farming. At the moment, off-farm food system provides employment to less than 10% of youth who are still a much under-represented group in the business. On the other hand, off-farm food system tends to employ more women than men, especially in the sector of 'food away from home' where up to 90% of jobs are held by women (ibid.). However, when women participate in rural non-farm activities, they tend to concentrate in labor-intensive sectors rather than capital intensive ones, thereby trapped by low investment and low productivity rural non-farm enterprises (Haggblade et al., 2010).

Allen et al. (2016) indicate that despite these positive signs, growth of jobs in off-farm food system is still concentrated in wholesale and retail, rather than agro-processing. For example, in West Africa, marketing activities, i.e. transport, logistics, retail and wholesale, account for 68% of the off-farm food system employment, while food processing for only 22% (Allen, Heinrigs, & Heo, 2018). Allen et al. (2016) further elaborate that these employment patterns are the result of the important role that food imports still play in local consumption; while trading in imported grains and high value-added agricultural products can boost employment in wholesale and retail sectors, potential gains in the agro-processing are, to a great extent, still lost to international suppliers.

4.4 Labor productivity

In order for the food systems to attract youth, mainly in the rural areas, and provide them with viable employment, either as wage or self-employed, it is necessary to boost the productivity, both in farming and the off-farm segments of the food value chains (ZEF & Akademiya2063, 2020). Despite popular perceptions, on a per-hour basis, productivity in agriculture is not necessarily intrinsically lower than in other sectors (Hicks et al., 2017; Arthi et al., 2016); however, underemployment due to seasonality drives the average productivity figures down; on average, farmers in Sub-Saharan Africa work 26 hours a week, in comparison to 39 hours in non-farm activities (Allen, Heinrigs, & Heo, 2018). Townsend et al. (2017) and Allen, Heinrigs, and Heo (2018) suggest that the use of new technologies, irrigation, mechanization, mixed farming systems and diversification should lead to an increase in the annual productivity. In the context of the increasing weather risk for agriculture, climate-smart solutions can also help boost productivity and build resilience (Nyasimi et al., 2014). Additionally, these technologies, and in particular mechanization, are expected not only to enhance productivity, but also to change youth perceptions on certain negative aspects of agriculture such as drudgery. Also, even though it is still not clear how mechanization will affect farming labor demand, it might free up young farmers' time for off-farm income-generating activities (Yeboah, 2018; Biggs & Justice, 2015).

In line with Johnston and Mellor (1961), Johnston and Kilby (1975) and Mellor (1976), it is generally expected that productivity growth in agriculture will be the main catalyst of structural transformation in Sub-Saharan Africa, as it was the case in much of Asia. Over the last two decades, the highest non-farm labor productivity growth was observed in countries displaying the highest levels of agricultural productivity (Yeboah & Jayne, 2018). Therefore, employment strategies for youth "need to integrate a system approach that captures the links between agricultural productivity, off-farm employment and rural and urban areas" (Allen, Heinrigs & Heo, 2018). It is necessary to undertake initiatives boosting entrepreneurship and private sector participation, and improving the rural business climate. Townsend et al. (2017) suggest that this can be achieved by both macroeconomic measures, i.e. political and macroeconomic stability, promotion of local and international trade, or improvement in regulatory quality, as well as microeconomic initiatives, i.e. reduction of barriers to entry, or entrepreneurship programs.

Investments in rural infrastructure are of paramount importance, especially because in several sectors, like power generation, there has been no change over the last twenty years, with only around 35% of population having access to electricity, and rural access rates being less than one-third of urban ones (WB, 2017). Transport infrastructure is lagging behind, and road density has actually declined in Sub-Saharan Africa over this period (ibid.). If Sub-Saharan Africa closed the gap with what is considered by the World Bank as the regional norm, the GDP growth rate would increase by 1.7 p.p., i.e. 1.2 p.p. due to increased quantity, and 0.5 p.p. due to improved quality of infrastructure, with electric power showing the largest effects in terms of quantity, and roads in terms of quality (ibid.). Investing in infrastructure is important not only in that, in the long run, it facilitates production and enhances market access (Berg, Blankespoor, & Selod, 2016), but additionally, in the short run, it might be an opportunity for engaging youth in public works, and considered a temporary, yet potentially effective solution to the youth unemployment problem (von Braun & Kofol, 2017). Access to infrastructure in the rural areas might have also effects on rural youth aspirations, rural out-migration, and rural entrepreneurship.

ICT infrastructure in particular presents great opportunities. In telecommunications, Sub-Saharan Africa has seen a dramatic improvement (World Bank, 2017), and the expanding mobile networks coverage and user base as well as the 'Internet of Things' will enable advanced collection and sharing of data and knowledge (Baumüller, 2017); once again, not only potentially boosting productivity, but also changing perceptions of agriculture as a modern rather than backward sector. Several initiatives are already taking place in Sub-Saharan Africa. For example, AniTrack, a start-up based in Ghana, provides a radio-frequency identification device (RFID) that tracks cattle's health, and notifies the farmer if any inconsistencies occur (Yeboah, 2018). FarmerLine, another company based in Ghana, but also operating in other countries, offers production, market and weather information to farmers using short audio messages sent to basic cell phones (ibid.). Social media is also increasingly mobilized. Digital Farmers in Kenya is an example of how such platforms can serve as a virtual marketplace (ibid.). Even though promising, it remains unclear to which extent such digital solutions can be scaled up and reach a higher customer base, especially among the youth.

4.5 Mobility

Despite the potential that food systems present in terms of employment creation for the African youth, and despite due attention they have received over the last years, recent evidence suggests that the debate on youth employment should acknowledge the complexity of livelihoods of young people, and replace the standard narrative of dyadic choices between agriculture and non-agricultural jobs, or rural and urban livelihoods with a more comprehensive perspective of pluri-activity and pluri-locality (White, 2020; Rigg et al., 2020). The extent of multiple-job holdings, where individuals are engaged in several economic activities in parallel, is admittedly very high among young people; even though the conventional statistics are rarely able to capture these employment patterns. In particular, the standard labor force surveys exclude the possibility of combining school and work, be it part-time or unpaid (Bourdillon et al., 2020), and only report the main job. Living Standard Measurement Surveys (LSMS) offer some improvement by also recording the secondary activity; but the most accurate insights on youth employment can be gained from the time-use surveys which not only record economic and non-economic activities of individuals but also time spent on each activity (Daum et al., 2018; Dolislager et al., 2021). Unfortunately, due to the high monetary and time cost they require, such surveys are available only for a few countries.

Young people's livelihoods often include periods of mobility between places and sectors of economic activity (Rigg et al., 2020). Sumberg et al. (2012) point out that youths' livelihood choices are rarely permanent and thus, a life-course approach would be more appropriate to study their interactions with the food systems and rural spaces rather than static snapshots of employment patterns. For instance, in the sms-survey, more than 50% of respondents indicates that their rural-urban migration aspirations and prospects will depend on the conditions prevailing at the given point in time. For young

people, mobility out of agriculture does not necessarily preclude taking up farming at later stages in life (Huijsmans et al., 2021), especially considering the extent of circular and return migration. Second, out-migrants often retain a certain degree of engagement in farming back home through remittances that can be used for productive investment in agriculture (Rozelle, Taylor & deBrauw, 1999). “As such, the relationship between food systems, youth aspirations, employment and mobility is complex and does not follow a linear path” (HLPE, 2021).

5 Constraints

5.1 Access to land

Irrespective of their career and livelihood choices, young people face important barriers when entering labor markets – but also once they are already participating in the labor markets. The literature points out lack of or limited access to resources: knowledge and skills, finance, markets and land, as the principal constraints which young people are exposed to. It is often argued that these constraints are not exclusive to youth; and that adults are affected by the same constraints – which can also make the design of youth policies more difficult (Filmer & Fox, 2014). However, even if the obstacles are similar for young and adult workers in many contexts, the magnitude of impacts is usually much higher for youth due to the life-cycle effects. Because of their young age and dependency relationship with adults, especially parents, young people have limited or no control over resources – even those rightfully earned by them (Löwe & Phiona, 2017). These intergenerational power dynamics are very important when considering access to resources, as access to both tangible and intangible assets, including knowledge, is most often obtained through transfer between generations (HLPE, 2021).

Access to land is one such example. Land ownership is strongly concentrated among older adults (Filmer & Fox, 2014). In rural Sub-Saharan Africa, youth rely on inheritance and gifts, or informal rental markets, to access plots under usufruct land right systems (Kosec et al., 2017). However, the growing population pressure has led to severe land scarcity in many countries (Jayne, Mather, & Mghenyi, 2010). Even though, at the continental level, Africa is considered as land-abundant and the estimated 52% of the world's remaining arable land is in Africa (Deininger et al., 2011), most of this land is concentrated in eight countries, while the rest of countries face increasing land pressures (Chamberlain, Jayne & Headey, 2014). For example, in Ethiopia, the average farm size declined from 1.4 ha in 1977 to 1 ha in 2001, and in some regions, this figure is even lower, less than 0.5 ha (Headey, Dereje & Taffesse, 2014). The situation has deteriorated particularly for younger farmers: those below the age of 38 have farm sizes that are almost 0.2 ha smaller than farmers aged 50 years and about 0.3 hectare smaller than those aged 60 years (ibid.). In Ghana, young farmers' landholdings are typically 1 to 3 acres (Kidido, Bugri, & Kasanga, 2017). The problem lies not only in a decreasing total farm size – increasing land fragmentation is also an issue that has negative impacts on farm productivity (Ali & Deininger, 2015). Women are significantly disadvantaged with respect to their land rights (FAO, 2018).

Policies to improve access to land for young people are difficult to implement. Filmer and Fox (2014) argue that the two aspects of land administration that matter most to young people are improving land tenure security and relaxing controls on land rentals. Only 10% of occupied land in Africa is formally registered (WB, 2012), however, several countries, i.e. Rwanda, Ethiopia, Madagascar, Uganda and Ghana, have undertaken the formal process of documenting individual land ownership (Filmer & Fox, 2014). It has been shown that the property rights documentation can reduce transaction costs related to property transfers; for example, in Ghana and Rwanda, these costs were reduced to less than 1% of the property value (WB, 2012). Land rights certification might positively affect land rental activity (Filmer & Fox, 2014) which, in turn, is expected to ease access to land for youth (Kosec et al., 2017). However, in many countries, for example in Ethiopia, the existing restrictions on land rental market continue to disadvantage prospective young farmers (Deininger, 2003). Therefore, removing restrictions on land markets would have the potential to create both efficiency and equity benefits (Deininger, Stavastano, & Xia, 2017). Finally, redistribution of agricultural land is another option that governments might consider in order to address the youth land issue; however, redistribution programs should be properly designed and attain a large enough scale to be effective. For example, Malawi's pilot land reform program seems to bring the expected results; on the other hand, South Africa's several attempts to redistribute land have failed so far (Filmer & Fox, 2014).

5.2 Access to finance

In 2014, only 20.5% of 15 – 24 years old adults held an account at a financial institution or through a mobile money provider; the respective share for older adults was 33%. Only 11% of African youth saved in a formal financial institution (Demirguc-Kunt et al., 2015). The worst situation is reported in the CFA system in West and Central Africa, where excessive regulation has restrained innovation in the financial sector and where the penetration of financial institutions is extremely low (Riquet & Mbenge, 2013). These figures do not imply that most of young adults in Sub-Saharan Africa do not save or contract loans – on the contrary, almost 50% reported saving some money but mostly in an informal way. Similarly, almost half of young adults reported contracting a loan but in only one out of fourteen cases it was a loan from a bank (Demirguc-Kunt et al., 2015). Access to finance remains one of the biggest constraints for youth to enter productive activities, especially in self-employment, whether on or off farm.

The challenges of financial expansion for youth in Sub-Saharan Africa are non-negligible. First of all, youth lack collateral: they rarely have formal land titles, valuable mobile assets, or a steady employment contract, which makes them ineligible for formal credit (Filmer & Fox, 2014). Additionally, since typically, credits contracted by youth are of a small amount, while the fixed costs for a bank are relatively large, the cost of lending to youth remains high. Even the most efficient financial institutions report that they have to earn on average 19% a year on their loan portfolios just to cover the operating costs (ibid.). Several innovations are proposed as a way to increase access to financial services. Alternative forms of collateral are one example; the 2010 amendment of the OHADA Uniform Act on Secured Transactions, effective in 17 Sub-Saharan countries, allows borrowers to use a variety of assets as collateral, i.e. warehouse receipts, movable property and receivables that remain in the hands of the debtor (AgriFin, 2012). Contracting arrangements are another option, and several already operating examples like Kenya's DrumNet Project seem promising (AGRA, 2015). Leasing, which requires less or even no collateral, could be a solution to acquire farm equipment, for example, DFCU Leasing in Uganda provided USD 4 million in farm equipment leases in 2002 (Kloppinger-Todd, Nair & Mulder, 2004). Additionally, partial loan guarantees, like the one provided by the Alliance for a Green Revolution in Africa (AGRA) in Kenya, Mozambique and Tanzania, can result in lower interest rates (Filmer & Fox, 2014). None of these initiatives are targeted at youth specifically. Filmer and Fox (2014) argue that since youth are a particularly risky group, separating them from a larger risk-sharing pool would make them even less attractive to financial institutions. Proliferation of mobile finance and mobile banking across Africa has also been considered as a pathway to increase inclusiveness of financial services; however, Parlasca, Johnen and Qaim (2021) show that so far, mobile financial services have not yet had a transformative effect on agriculture, with fewer than 15% of farmers using them for agricultural purposes, and only 1% using mobile loans.

5.3 Skills and innovation

Sub-Saharan Africa has made a remarkable progress in educational participation and attainment. The share of children completing primary education increased from 54% in 1990 to 70% in 2016; important gains are also visible with respect to secondary education (Filmer & Fox, 2014). Between 2000 and 2017, the literacy rate of young people in Sub-Saharan Africa rose from 65.9% cent to 75.4% (ILO, 2020). However, the quality of education has not improved at the same pace. In a survey of experts from 36 African countries, 41% of respondents indicated lack of skills as a major obstacle for youth, while even a higher share reported a mismatch between skills held by job seekers and skills required by employers (AfDB, 2012). While the comparable data is largely missing, the three countries that participated in the Progress in International Reading Literacy Study (PIRLS) in 2016 (Egypt, Morocco and South Africa) were the three lowest ranked countries; and a similar outcome was reported for mathematics and science evaluated in 2015 by the Trends in International Mathematics and Science Study (TIMSS) (ILO, 2020).

In particular, there seems to be a disconnect between formal education systems and skill demand in the food systems despite the role they play in livelihoods and employment. So far, not only did formal education systems not have the capacity to prepare students for jobs in the agriculture and food sector, but, very often, they have perpetuated negative perceptions about these kinds of jobs among students (Katz, 2004; Ansell et al., 2020). Agriculture is often neglected in the tertiary education; only 2% of students specialize in agriculture – making it almost impossible for agro-industrial firms to find high-level managerial candidates in this sector, according to a large recruitment company operating in many African countries (AfDB, 2012). Even when they exist, the agricultural curricula in tertiary education, not only in Africa but also elsewhere in the world, tend to adopt very traditional approaches to teaching agriculture (Jordan et al., 2014) and are not adapted to the fast-changing realities of the food systems.

Formal education programs that relate to food systems need to provide a better tailored skillset to their graduates, also including soft skills like critical thinking, problem solving, collaboration or communication. They should offer trainings in new topics such as conservation agriculture, climate-smart agriculture, precision agriculture, organic farming or urban farming (UNEP, 2021, cited in HLPE, 2021); and equip students with skills required for professions such as agronomists, crop breeders, nutritionists, food entrepreneurs or policy advocates (Valley et al., 2018; HLPE, 2021).

Again, women are disadvantaged in the agriculture-related programs, especially at tertiary level, where their participation is significantly lower compared to men, even in countries where on average, women's participation in tertiary education is similar to that of men (Mukembo et al., 2017). In Sub-Saharan Africa, only 25% of students enrolled in post-secondary agricultural programs were women (Kruijssen, 2009), leading to very low numbers of female professionals in agriculture (Beintema & Di Marcantonio, 2019). Across agricultural research institutions of the Global South, women constitute only 20% of scientists (Beintema, 2006). In this context, systemic changes are required in educational systems, but also agricultural policy, in order to support participation of girls and women in employment in food systems (Glazebrook, Noll & Opoku, 2020). The importance of professional social networks has also been emphasized in this respect (Mukembo et al., 2014); the African Women in Agricultural Research and Development (AWARD) network being a good example.

In the short run, the shortfall in skills might be addressed with post-school training, i.e. apprenticeships and technical vocational education and training (TVET). However, currently, enrollment in TVET is very limited in Sub-Saharan Africa: only 4% of the 24 – 35 years old adults have ever attended this kind of training (Filmer & Fox, 2014). On the one hand, this might result from limited local capacities, on the other, since most TVET requires some secondary schooling, a big share of young people are excluded from taking up this opportunity. Besides, in case of agriculture, a recent review of TVET in selected Sub-Saharan countries suggests that the training which is offered too often does not match the needs of the farmers and other agribusiness actors (Kirui & Kozicka, 2018).

6 Policy considerations

The youth employment challenge clearly leaves a lot of room for policy intervention in order to address the barriers and constraints that young people in rural Africa face, and to foster their productive employment. The need for action has been increasingly recognized by the policymakers. In 2006, the African Union (AU) Member States adopted the African Youth Charter which sets a general framework for national youth policies. In 2008, the period of 2009 – 2018 was declared the African Youth Decade by the AU. These actions are considered to be an important milestone in the African youth policy process, as they require countries to commit to developing and implementing integrated cross-sectoral youth strategies (Gyimah-Brempong & Kimenyi, 2013). In 2014, out of 54 African countries, 23 had a national youth policy, and 14 were in the process of developing such a policy (Youth Policy, 2014).

Youth policies relative to employment include the following types of interventions: (1) training and skills development, (2) wage subsidies, (3) search and matching assistance, and (4) entrepreneurship promotion; or a combination of thereof (Kluve et al., 2017; McKenzie, 2017). The first three types of interventions can be classified as traditional interventions implemented under the umbrella of active labor market programs (ALMPs) with a focus on formal wage employment. Skills trainings operate on the labor supply side, and aim to increase the employability of workers through vocational training (McKenzie & Woodruff, 2014); wage subsidies are intended to increase the demand for labor, through subsidizing the cost of labor to firms; finally, search and matching assistance interventions aim to lower frictions that prevent demand from meeting supply in the labor market (McKenzie, 2017; Datta et al., 2018). Because formal jobs are often scarce in rural areas of developing countries, and the problem is further exacerbated by spatial mismatches in labor markets, with very different employment opportunities for the same skills depending on where individuals are located (McKenzie, 2017; Bryan, Chowdury & Mushfiq, 2014), it is often argued, as noted above, that youth employment policies should instead place emphasis on promoting entrepreneurship (Cho & Honorati, 2014).

Recent meta-analyses and systematic reviews of impact evaluations of labor market interventions targeting youth (Table 2) provide mixed evidence on their effectiveness in improving youth's labor market outcomes such as employment and earnings, and suggest that the effect is modest, if any. For instance, a meta-analysis by Kluve et al. (2017) indicates that only a third of the interventions included in the analysis had a positive and statistically significant impact on either of the two outcomes. However, it has to be noted that most of the available meta-analyses and reviews of ALMPs impact evaluations are, to a great extent, based on evidence from either high-income countries or, in case of low- and middle-income countries, on evidence from regions other than Africa (Table 2). At the same time, this evidence suggests that the effectiveness of ALMPs is usually higher in low- and middle-income countries compared to high-income countries. Also, even though the evidence from Africa is still limited compared to other regions, the literature has recently grown substantially. Table 3 lists the randomized control trial (RCT)-based impact evaluations of ALMPs in Africa published over the last ten years.

It is increasingly recognized that rather than the type of intervention, it is the design of the intervention as well as the local context that matter for the intervention success (Datta et al., 2018; Kluve et al., 2017; Puerto, 2007). This is also what makes comparable estimates of the effectiveness of various interventions difficult, since the interventions vary widely in terms of their objectives, characteristics, conditions and target groups. Also, Kluve et al. (2017) and Card, Kluve and Weber (2018) suggest that interventions take time to bring results. The latter study shows that ALMPs have relatively small average employment effects in the short run (1-3 p.p.) but larger average effects in the medium run (3-5 p.p.) and longer run (5-12 p.p.). The time profile of average impacts in the post-program period varies with the type of ALMP: job search assistance programs tend to have similar impacts in the short and long run; training and private sector employment programs have larger average effects in the medium and longer runs. Public sector employment subsidies tend to have small or even negative average impacts at all horizons (Card, Kluve & Weber, 2018). In contrast, a recent study by Blattman, Fiala and Martinez (2020) indicates that even though an intervention – Youth Opportunities

Programme in Uganda – raised participants' employment by 17% and earnings by 38% four years after the intervention (Blattman, Fiala, & Martinez, 2014); these gains have completely dissipated nine years after the intervention. Grantees' investment leveled off; individuals in the control group eventually increased their incomes through business and casual labor; and so, both groups converged in employment, earnings, and consumption levels. However, grants had lasting impacts on durable asset stocks and skilled work.

Hence, so far, no type of intervention appears to be more effective than the others (Kluve et al., 2017); even though some studies provide evidence in favor of job search assistance (Eichhorst & Rinne, 2015); or trainings (Card, Kluve & Weber, 2018). In addition, McKenzie (2017) emphasizes the need to also consider the cost-effectiveness of interventions. Here, trainings and skill development programs perform particularly bad; for instance, no training program included in the analysis of Blattman and Ralston (2015) passes the cost-benefit test. Therefore, there is clearly a need to tailor interventions to the needs and constraints faced by the actual target group; and also identify potential bottlenecks that might hamper the participants from reaping the full benefits of the interventions (Datta et al., 2018).

The evidence suggests that the effectiveness of employment interventions often varies by the target group. For instance, Card, Kluve and Weber (2018) show that across all types of the traditional ALMPs, i.e. skills trainings, job search assistance and wage subsidies, larger average effects are observed for females and long-term unemployed, and smaller average effects for older workers and youths. On the other hand, Cho and Honorati (2014) emphasize that among all target groups, entrepreneurship programs have a positive and large impact for youth. Additionally, in case of interventions focusing on youth employment specifically, a number of studies report gendered differences in outcomes. Among studies based on evidence from Africa, Cho et al. (2013), Fiala (2014) and Honorati (2015) point to better outcomes for males than for females; on the other hand, Abel, Burger and Piraino (2020) observe positive outcomes for women, but not for men. These differences might point to the existence of deeper structural barriers, especially for women, that hinder them from integrating labor markets and which traditional ALMPs are not able to overcome. In this context, it may be important to design programs focusing specifically on girls and women. The evidence available for selected African countries shows that indeed, such well-targeted and well-designed programs can have tremendous impacts on girls and women and their labor market outcomes (Blattman et al., 2013; Adoho et al., 2014; Bandiera et al., 2020). In particular, the findings in Bandiera et al. (2020) point to the fact that in case of female youth, it is important that, rather than being strictly limited to interventions relative to employment, programs should also incorporate life-skills likely to affect other aspects of female livelihoods, such as teen pregnancy, or early entry into marriage or cohabitation. Irrespective of the gender, several studies also suggest that a potential benefit of various youth employment interventions may be in how they can influence youth's self-confidence, aspirations and future perspectives (Cho et al., 2013; Abel, Burger & Piraino, 2020).

Moreover, youth employment policies in developing countries are mainly focused on increasing employability of youth – usually through training skills programs; but in the context where the supply of labor is completely elastic, as far as firms are concerned, – which, despite oversimplification, fits the reality of many countries in Sub-Saharan Africa – interventions such as vocational training, apprenticeships or internships will only increase the supply of eligible workers (Fox & Kaul, 2018; Datta et al., 2018). Teal (2016) shows that public policy in Africa has been much more successful at increasing the supply of education than the supply of jobs the educated youth want, creating a mismatch between the rapidly increasing supply of educated labor and the weak demand for such labor by firms. It is therefore necessary that policy-makers reconsider their youth employment policies and re-balance supply-side policies with demand-side policies. A review by Fox and Kaul (2018) suggests that among the demand-side interventions, which target aspects such as access to finance, financial literacy, business development services, tax policy, formalization, infrastructure, as well as minimum wages, subsidies and public works, the most effective are the ones that reduce constraints to firm expansion – which then encourages firms to hire more workers. Interventions targeted to larger firms are more likely to have substantial employment effects (Datta et al., 2018).

The evidence on job creation effects of the demand side interventions is less comprehensive and less systematic compared to the evidence on the supply side employment interventions (Datta et al., 2018). Since the interventions focus on firms and not workers, they are not necessarily targeted at jobs, even less so at jobs for youth; instead, they aim at increasing productivity and sales growth – however, the firms that generate sales and turnover are not always the same as the ones generating jobs (Mamburu, 2017). On the other hand, jobs can have positive externalities if, for instance, they reduce expenditures on social assistance programs, that increase the value of given jobs (Robalino & Walker, 2017). A recent review of interventions targeted to small and medium enterprises (SMEs) including a variety of services such as training, access to credit, support for innovation, export promotion, shows that programs can have positive effects on jobs, labor productivity, and revenue or profits but these effects are not large; the cost effectiveness of interventions is difficult to estimate (Cravo & Piza, 2016). On the other hand, sectoral approaches, especially those related to investment in value chains, appear to be highly correlated with job creation, as evidenced by the apparel industry in Bangladesh (Dinh et al., 2012) and coffee, garment and cut flower industries in Ethiopia (Ingraam & Oosterkamp, 2014).

While the evidence suggests that, if they are to be effective, youth employment policies should be comprehensive and include both demand- and supply-side interventions in parallel, in practice, and especially in poor countries where public budgets are subject to severe financial constraints, policy-makers are forced to set priorities in implementation of interventions. As such, policy-makers are exposed to time-consistency problems whereby they tend to prioritize interventions with can potentially bring tangible results in the short run at the cost of neglecting the equally important long-run strategies of youth employment creation. This political economy aspect can, at least partially, explain why current youth employment policies focus so strongly on supply-side interventions while neglecting the demand-side interventions which take longer to realize. In addition, potential trade-offs between various policy measures also need to be accounted for. Measures that show complementarities in their impacts should be put forward – however, these aspects are still largely missing in the literature, where impact assessments of youth employment interventions are mostly done for specific interventions in separation from other potential interventions. Finally, from the policy perspective, it is important to ensure that a conducive legal framework and employment protection legislation (EPL) is put in place. Kuddo, Robalino and Weber (2015) stress the importance of regulatory constraints to hiring youth – in that they affect hiring and firing procedures as well as the cost of workers – even though these considerations are clearly more important for formal than informal employment; nevertheless, they can have important economy-wide implications as well.

In light of this evidence, it is again relevant to stress the potential of the food systems to create employment for youth in rural Africa. It has indeed been increasingly acknowledged by the policy-makers, for example in the framework of the Comprehensive Africa Agriculture Development Programme (CAADP) of the AU. However, despite formal commitments, only a few countries have integrated youth-specific programs in national agriculture and food security plans (AGRA, 2015). Ghana's National Youth Policy, one of the notable examples, aims to promote youth participation in modern agriculture as a viable career opportunity and a business option (Government of Ghana, 2010). Several actions are outlined, for example assisting youth in the formation of farmer organizations, facilitating access to credit by youth groups, advocating for the creation of land banks for youth or facilitating access to market (AGRA, 2015). Ghana's Ministry of Food and Agriculture, a major partner in implementing this strategy, devised Youth in Agriculture Program (YIAP), aiming at facilitating youth to undertake farming as a commercial venture by providing interest-free credit on innovative inputs and mechanization, or training in specific skills in food processing or sales (Mahama, 2012).

Several challenges still persist, especially with respect to policies implementation, resulting mainly from significant institutional gaps between the legislative and executive branches, limited political and financial power of the delegated youth ministries, or lack of capacity to undertake program monitoring and evaluation (AGRA, 2015). Furthermore, limited youth participation in the political process, especially with respect to the youth matters, is another obstacle for designing and implementing successful youth policies. In Sub-Saharan Africa, 80% of respondents in a global UN survey admitted

lack of opportunities for engagement in decision-making process within their communities (UN, 2012, cited in AGRA, 2015). However, the African Youth Charter clearly advocates for the right of youth to participate actively in the design, implementation and evaluation of development strategies and policies (AU, 2006). While national capacities often remain limited, a number of youth boards, associations, networks and other bodies operate at the international level across the Sub-Saharan Africa, for example Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), Young Professionals for Agricultural Development (YPARD), Youth Alliance for Leadership and Development in Africa (YALDA), African Youth Initiative Network (AYINET) or Climate Smart Agriculture Youth Network (CSAYN) (AGRA, 2015). However useful and effective they are, they could not substitute for local youth groups which would enable a broader base of youth to voice their concerns and shape the decisions affecting their future.

Table 2. Summary of recent meta-analyses and systematic reviews of labor market interventions targeting youth

Study	Methodology	Findings
META-ANALYSES		
<p>Cho, Y., & Honorati, M. (2014). Entrepreneurship programs in developing countries: A meta regression analysis. <i>Labour Economics</i>, 28: 110-130.</p>	<p>A meta- analysis of impact estimates from 37 impact evaluations of entrepreneurship programs. A wide range of outcomes of interest include proxies of labor market activities and labor market income and profits. Focus on studies undertaken in developing countries; studies based on the evidence from Africa constitute 17% of the sample.</p>	<p>Entrepreneurship programs have a positive and large impact for youth, among all target groups. The impacts are visible in terms of business knowledge and practice, but no immediate translation into business setup and expansion or increased income is observed. Providing a package of training and financing is most effective for labor activities. Additionally, financing support appears more effective for women and business training for existing entrepreneurs than other interventions to improve business performance. Involving the private sector for the delivery of programs and evaluating the program in the longer term appears to be more closely associated with improved effects of programs.</p>
<p>Eichhorst, W., & Rinne, U. (2015). An Assessment of the Youth Employment Inventory and Implications for Germany's Development Policy. I Z A Research Report No. 67.</p>	<p>A meta-analysis of impact estimates from 86 active labor market programs (ALMPs) interventions targeting youth. A complementary qualitative assessment focuses on interventions in Youth Employment Inventory (YEI), most of them implemented in developing countries.</p>	<p>Robust impact assessment is missing for a majority of interventions in the YEI. For those with rigorous evaluation, the results suggest that youth employment interventions are more effective in developing than developed countries. Job search assistance outperforms other types of interventions. Combined measures do not outperform programs that include only one type of intervention.</p>
<p>Kluge, J., Puerto, S., Robalino, D., Romero, J.M., Rother, F., Stöterau, J., Weidenkaff, F., & Witte, M. (2017). Interventions to improve the labour market outcomes of youth: A systematic review of training, entrepreneurship promotion, employment services and subsidized employment interventions. <i>Campbell Systematic Reviews</i>, 13: 1-288.</p>	<p>A meta-analysis of impact estimates from 113 experimental and quasi-experimental impact evaluations of training, entrepreneurship promotion, employment services and subsidized employment interventions targeting youth. Outcomes of interest include employment, earnings and business performance. Estimates based on the evidence from Africa constitute 10% of the sample.</p>	<p>Youth employment interventions have a positive but small effect on employment and earnings, no effect on business performance was demonstrated. The effects appear over the long run. Impacts are higher in low- and middle-income countries compared to high-income countries. In low- and middle-income countries, skills trainings and entrepreneurship interventions produce the greatest impacts; interventions that include multiple components lead to better outcomes. Rather than thy type of intervention, the design matters more.</p>
<p>Card, D., Kluge, J., & Weber, A. (2018). What works? A meta-analysis of recent active labor</p>	<p>A meta-analysis of impact estimates from 207 impact evaluations of active labor</p>	<p>ALMPs have relatively small average effects in the short run (1-3 p.p.) but larger average effects in</p>

<p>market program evaluations. <i>Journal of the European Economic Association</i>, 16(3): 894-931.</p>	<p>market programs (ALMPs). Program effect measured in terms of probability of employment. Estimates based on the evidence from non-OECD countries constitute 15% of the sample.</p>	<p>the medium run (3-5 p.p.) and longer run (5-12 p.p.). Time profile of average impacts in the post-program period varies with the type of ALMP: job search assistance programs tend to have similar impacts in the short and long run; training and private sector employment programs have larger average effects in the medium and longer runs. Public sector employment subsidies tend to have small or even negative average impacts at all horizons. The average impacts of ALMPs vary across groups, with larger average effects for females and long-term unemployed, and smaller average effects for older workers and youths.</p>
<p>REVIEWS</p>		
<p>McKenzie, D. (2017). How Effective Are Active Labor Market Policies in Developing Countries? A Critical Review of Recent Evidence, <i>World Bank Research Observer</i>, 32: 127-154.</p>	<p>Review of active labor market programs (ALMPs) impact evaluations in developing countries. The interventions are classified as (i) skill training, (ii) wage subsidies, and (ii) job search assistance.</p>	<p>Traditional ALMPs have little or no impact on employment and earnings; and their cost-effectiveness vary, with training programs found to be particularly costly. The most promising interventions appear to be ones that help workers access different labor markets, as well as overcome sectoral and spatial mismatches.</p>
<p>Datta et al. (2018). Integrated Youth Employment Programs. A Stocktake of Evidence on what works in Youth Employment programs. Jobs Working Paper, Issue No. 24, World Bank.</p>	<p>An extensive desk literature review and analysis of the major meta-analyses and literature reviews on both the labor demand side and labor supply side youth employment interventions.</p>	<p>Large body of evidence on the supply side youth employment interventions exists; but the evidence on the employment impacts of the demand side interventions is weak. Both the supply or demand side interventions are not automatically successful in creating jobs for youth (or any other groups), and design and implementation characteristics matter significantly. It is important to take an integrated approach because the long-term success of programs to improve employability of youth will depend on that there is demand for workers.</p>

Source: Author's own elaboration.

Table 3: Summary of recent impact evaluations of youth employment interventions in Africa

Study	Country		Findings
SKILLS TRAININGS			
Honorati (2015)	Kenya	<p>Kenya Youth Empowerment Project</p> <p>Intervention: classroom-based technical training coupled with three months of internships in private firms.</p> <p>Target: youth out of school and/or with no permanent job; with a minimum of eight years of education.</p>	<p>Positive impact on placing youths in paid jobs for male participants, with a 15% increase in probability of employment 15 months after the program. Positive effects on earnings were found only for older males, and females. No effects were found on the probability of starting up a new business, being self-employed, or working for a family business.</p>
Adoho et al. (2014)	Liberia	<p>Economic Empowerment of Adolescent Girls</p> <p>Intervention: technical and life-skills training with support to enter wage-employment or start a business.</p> <p>Target: Adolescent girls with basic literacy and numeracy skills, not enrolled in school.</p>	<p>The program increased employment by 47% and earnings by 80%. Positive effects on a variety of empowerment measures, including access to money, self-confidence, and anxiety about circumstances and the future were also documented.</p>
Cho et al. (2013)	Malawi	<p>Apprenticeship Training Programme and Entrepreneurial Support for Vulnerable Youth</p> <p>Intervention: apprenticeship programme.</p> <p>Target: vulnerable youth, i.e. orphans and school dropouts.</p>	<p>The program led to enhanced (self-reported) skills of the type that the training was intended to impart. Male trainees reacted by continuing to invest in their human capital development during the post-training period, but there were no significant effects on labor market outcomes in the short run. Better outcomes for boys compared to girls.</p>
Bandiera et al. (2020)	Uganda	<p>Empowerment and Livelihood for Adolescents</p> <p>Intervention: vocational and life-skills training; focus on skills related to self-employment and financial literacy; additionally, information on sex, reproduction, and marriage is provided.</p> <p>Target: adolescent girls.</p>	<p>Four years post intervention, adolescent girls in treated communities were more likely to be self-employed. Teen pregnancy, early entry into marriage/cohabitation, and the share of girls reporting sex against their will fell sharply.</p>

WAGE SUBSIDIES			
Levinsohn et al. (2014)	South Africa	<p>Youth Wage Subsidies for South Africa</p> <p>Intervention: a voucher for wage subsidy provided to individuals seeking jobs; firms that employ them are compensated for a portion of the wages; only applies to full-time formal employment.</p> <p>Target: youth in Johannesburg metropolitan area, eThekweni metropolitan area and Polokwane.</p>	<p>Participants who were allocated a wage subsidy voucher were more likely to be in wage employment both one year and two years after allocation. The impact of the voucher thus persisted even after it was no longer valid. The magnitude of these effects was relatively large – those in the voucher group were 7.4 p.p. (approximately 25%) more likely to be in wage employment one year after allocation and of similar magnitude two years later. This impact was not driven by changes in the sample composition.</p>
JOB SEARCH ASSISTANCE			
Abebe et al. (2017a)	Ethiopia	<p>Intervention: transport subsidy or job application workshop.</p> <p>Target: youth in Addis Ababa.</p>	<p>Despite finding large positive effects on job quality, no average treatment effects on the overall probability of having a job were detected. However, sizeable increase in earnings and employment rates among the most disadvantaged job-seekers were observed.</p>
Abebe et al. (2017b)		<p>Intervention: job fairs that match firms with a representative sample of young, educated job-seekers.</p> <p>Target: young unemployed people in Addis Ababa who completed high school.</p>	<p>The meetings at the fairs created very few jobs: one for approximately 10 firms that attended. This result can be explained by mismatched expectations: about wages, about firms' requirements, and the average quality of job-seekers.</p>
Franklin (2017)	Ethiopia	<p>Intervention: cash grant covering transport cost to the city center to receive information about new jobs.</p> <p>Target: young unemployed educated job-seekers.</p>	<p>Treated respondents increased job search intensity and were more likely to find good, permanent, jobs. Subsidies also induced a short-term reduction in temporary work. Cash constraints caused young people to give up looking for good jobs too early.</p>
Bassi & Nansamba (2017)	Uganda	<p>Intervention: (i) a matching component, whereby firms and workers are randomly matched for job interviews, and (ii) a signaling component, by introducing experimental variation in whether information on the soft skills of workers, such as work ethic and interpersonal skills, is disclosed to both sides of</p>	<p>Both workers and employers reacted to the information: managers of higher ability updated their beliefs on worker's skills, while workers with higher skills revised their outside options upwards, as proxied by their stated reservation wages and probability to be back in training one year post-intervention. The revelation of information on skills significantly increased overall job offers and hires for workers in the middle of the skill distribution: the probability</p>

		<p>the labor market, through the provision of certifications.</p> <p>Target: young workers fresh out of vocational education and looking for jobs; and small and medium enterprises looking for workers.</p>	<p>of employment at the matched firm increased from 2.3% to 5.5% for this group of workers.</p>
Abel, Burger & Piraino (2020)	South Africa	<p>Intervention: (1) applications with and without reference letters were submitted on behalf of job seekers to vacancies; (2) job seekers were encouraged to obtain a reference letter.</p> <p>Target: actual job seekers who visit the Labour Centres.</p>	<p>(1) For the same applicant, attaching a letter increased the probability of receiving a response from 4.2% to 6.7% (a 60% increase) and the rate of interview requests from 2.4% to 3.9% (a 62% increase). The overall effect was driven by female applicants, whose response rates approximately doubled.</p> <p>(2) Female participants who obtained letters were significantly more likely to receive job interviews and to be employed after three months. On the other hand, no impacts were found for men.</p>
ENTREPRENEURSHIP PROMOTION			
Adoho et al. (2014)	Liberia	<p>Economic Empowerment of Adolescent Girls</p> <p>Intervention: technical and life-skills training with support to enter wage-employment or start a business.</p> <p>Target: Adolescent girls with basic literacy and numeracy skills, not enrolled in school.</p>	<p>The program increased employment by 47% and earnings by 80%. Positive effects on a variety of empowerment measures, including access to money, self-confidence, and anxiety about circumstances and the future were also documented.</p>
Premand et al. (2012)	Tunisia	<p>Turning Theses into Enterprises</p> <p>Intervention: business training, including soft-skills; and personalized coaching, including business plan development; seed capital for best business plans.</p> <p>Target: university students in applied undergraduate curriculum.</p>	<p>The entrepreneurship track was effective in increasing self-employment among applicants, but the effects are small in absolute terms. In addition, the employment rate among participants remained unchanged, pointing to a partial substitution from wage employment to self-employment. The program fostered business skills, expanded networks, and affected a range of behavioral skills.</p>
Fiala (2014)	Uganda	<p>Start and Improve Your Business</p> <p>Intervention: one of the following components: (i) a cash grant, (ii) a loan, (iii) business skills</p>	<p>Men with access to loans and training reported significantly higher profits. The loan-only intervention had some initial impact, but this did not last. There were no impacts from the grant intervention, and no effects for women from any of the interventions. The results</p>

		<p>training and a loan, (iv) business skills training and a cash grant.</p> <p>Target: microenterprise owners in semi-urban locations.</p>	<p>suggest that male-owned microenterprises can grow through finance when paired with training.</p>
Blattman et al. (2013)	Uganda	<p>Women's Income Generation Support</p> <p>Intervention: business skills training, cash grant, and support to start a non-farming business, including business plan development. Approved business plans eligible for start-up grant.</p> <p>Target: young women in war-affected region.</p>	<p>Dramatic increases in business startup and reduction in poverty were observed. A year after the intervention, monthly cash earnings doubled, savings tripled, and short-term expenditures and durable assets increased 30 to 50% relative to the control group. While the absolute changes seem small in magnitude, these were huge gains relative to where these women started. The treatment was most impactful on the people with the lowest initial levels of capital and access to credit.</p>
Blattman, Fiala & Martinez (2020)	Uganda	<p>Youth Opportunities Programme</p> <p>Intervention: one-time unsupervised cash grants, non-agricultural vocational training.</p> <p>Target: poor young people from small towns and villages in Uganda.</p>	<p>Four years on, an experimental evaluation found grants raised work by 17% and earnings by 38% (Blattman, Fiala, & Martinez, 2014). After nine years, these gains have dissipated. Grantees' investment leveled off; controls eventually increased their incomes through business and casual labor; and so, both groups converged in employment, earnings, and consumption levels. However, grants had lasting impacts on durable asset stocks and skilled work.</p>

Source: Author's own elaboration.

7 Conclusion

Demographic pressure and the youth bulge have spurred much debate in Africa. With the youngest population in the world and high numbers of new entrants into the labor market every year, Africa has to address its youth employment challenge. So far, despite sustained economic growth, African countries have not been successful in creating decent employment for their youth and absorbing the fast-growing labor force. The structure of their economies, heavily dependent on agriculture and, increasingly, on services, but with limited role of manufacturing, has resulted in very low employment elasticities of growth and jobless growth. Considering the already strenuous conditions in the local labor markets, characterized by high levels of informality, underemployment and working poverty, the projected influx of new entrants will therefore put additional pressure on the already insufficient number of decent jobs.

This paper provides a literature review on youth employment challenge in Africa. The literature on youth employment in Africa as well as in other regions of the world has been rapidly growing over the last years, building up available evidence that can inform policy. With the growing number of studies, the understanding of livelihoods, aspirations, opportunities and challenges of young people has substantially improved. Nevertheless, important gaps still persist, especially with respect to the impact assessment of youth employment policies and interventions, where the evidence from developing countries is still limited and often offering ambiguous findings. In addition, there is a growing recognition of complexity and non-linearity of youth employment transition trajectories which calls for adoption of comprehensive frameworks of analysis, in contrast to earlier linear or dyadic approaches. This also means that efforts to provide insights on the dynamics of youth transitions should complement the so far mostly static analyses.

The trajectories of youth transitions into productive employment are influenced by life-cycle effects, relative to the measure of accumulated life experience; and generational effects, relative to the measure of the conditions prevailing during an individual's formative years. A confluence of the two types of effects exposes young people to a number of constraints both when entering but also already once in the labor market. In case of rural Africa, with its many structural deficiencies and segmented labor markets which hinder optimal human capital allocation, such constraints are particularly important. These constraints have been conceptualized in the literature in terms of access to resources: skills and innovation, finance, and land. While these constraints are not unique for youth, as they also concern the adult population, they are often of greater magnitude or intensity in the case of youth. This is mainly due to the intergenerational power imbalances and limited agency of young people.

However, there are also reasons for cautious optimism. First, in the long run, the demographic structure in Africa will improve. The youth bulge has already started receding, while the adult working-age population is the fastest growing population group in the region. This creates potential for demographic dividend, and as such, presents opportunities for economic growth and structural transformation. To realize this potential, governments need to invest in youth and create enabling environment for their productive employment. While youth employment challenges have been increasingly recognized in policy at regional and country level, the actual measures implemented by governments tend to focus on supply-side interventions while leaving out demand-side interventions. Such approaches, especially in the context of Africa where labor supply is abundant, risk further enforcing imbalances in the labor market if the problem of insufficient labor demand is not addressed. Various labor market interventions, including training and skills development, wage subsidies, search and matching assistance and entrepreneurship promotions have been implemented in African countries. However, impact evaluations provide mixed evidence on their effectiveness in improving youth's labor market outcomes such as employment and earnings, and suggest that the effect is modest, if any. However, programs that target girls and women appear to have particularly strong impacts on their labor market outcomes.

The potential of food systems as catalysts for employment creation in Africa has been put forward in the literature. Growing food demand as well as food system transformation, both a consequence of rising per capita incomes, urbanization and new export opportunities, are expected to result in a shift of production from cereals to high value fresh, processed and convenience foods. This, in turn, is expected to translate into growing labor demand in the sector, not only in agriculture, but also in off-farm segments of food value chains which are usually considered to be highly labor-intensive. In terms of job creation, off-farm food system is growing much more rapidly in percentage terms than farming, but since the growth is from a very small base, in absolute terms, the contribution of off-farm food system employment to new jobs is still lower than that of farming. Self-employment in the agri-food sector is second, after farming, most dominant category of youth employment in rural areas.

Despite common perceptions that youth are not interested in working in agriculture and food systems, the data suggests that these jobs still play a significant role in the African youth's aspirations. Close to 25% of young Africans want to work in the food and agriculture sector, and the share is higher in some countries, close to 40% in Kenya, Liberia, Malawi and Tanzania. Accordingly, the average age of African farmers is not rising – it is also much lower than previously claimed, at 34 years of age and not 60. However, youth aspirations with respect to agriculture remain conditional on several factors that can make agriculture and food system jobs attractive, including technology, investment and market opportunities, and, of course, decent earnings. Increasingly, youth consider agriculture and other food system activities as a business venture for entrepreneurs. To fully realize its potential, however, systematic investments are necessary to increase labor productivity and incomes. Improvements in living conditions in rural areas are also vital if youth is to consider this form of employment. Finally, the literature has acknowledged the complexity of rural livelihoods, where pluri-activity, pluri-locality and various forms of mobility play an important role, creating strong linkages between sectors and between rural and urban spaces.

A limitation of this literature review is that it has not explicitly explored the diversity of contexts within the African continent. Lack of sufficient number of studies that would be adequately representative for regions or countries of Africa made it impossible to account for contextual factors susceptible of influencing local youth labor markets. Compared to most of Sub-Saharan Africa, the nature of youth employment challenge in Southern Africa and Northern Africa is very distinct. These differences should be further explored in order to advise locally relevant policies. Finally, it might be useful to have a closer look at lessons learned in Asia, where similar demographic process occurred earlier, and to see to which extent Africa can draw on Asian experiences.

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