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2019 Rural Development Report

The narrative on rural youth and economic opportunities in Africa: facts, myths and gaps

by
Athur Mabiso
Rui Benfica

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Abstract

A narrative on rural youth in Africa has continued to evolve in policy circles around the world. Much of it is driven by population statistics that point to an imminent youth bulge in Africa and concerns about a poor economic outlook (stagnation) for African productivity and growth. Fears of massive unemployment, social unrest and undesirable migration due to limited economic growth drive the bulk of the discourse. This is juxtaposed with the promise of a youth dividend for the continent, which is highlighted by some quarters of the policy debate. This paper reviews the narrative on rural youth and economic opportunities in Africa, using a set of policy documents from various African countries and regional and international organizations. It then looks at the evidence to question the validity of the narrative. Where evidence does not exist, the paper uses available data from a variety of sources to begin painting a descriptive picture on rural youth in Africa. Some misconceptions in the narrative are identified. These include the notions that rural youth are not engaging in agriculture, that they are better educated (skilled) and that they are more likely to use and benefit from internet and communications technologies (ICT). In addition, the notion that youth entrepreneurship offers great promise for rural youth in Africa is brought into question.

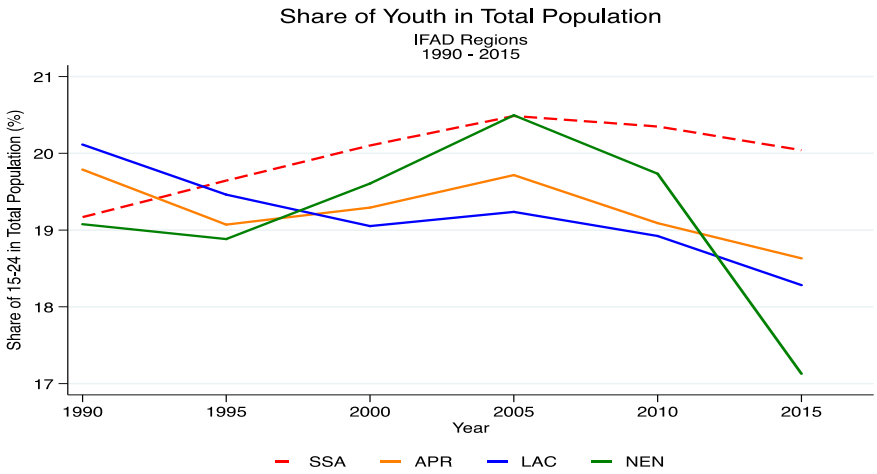
What this paper shows is that rural youth in Africa are in fact engaging in agriculture and the agrifood system in general. Moreover, while rural transformation is indeed taking place, with some rural youth moving into other sectors of the economy, large numbers of African rural youth are still predicted to enter the agrifood system in the coming decades. This calls for more investment in African agriculture to enhance the prospects of rural youth in Africa. While the evidence does show that African youth are indeed more educated than their parents and previous generations, several constraints on the level and quality of learning in rural Africa are raised. In particular, young African women in rural areas face a multitude of barriers to human capital formation, including early pregnancy and parenthood as well as early marriage. These constrain their prospects for continued learning and skills development and in turn limit their economic outlook. New evidence on non-cognitive skills development and learning outside conventional school settings provides important insights on some of the promising interventions that could enhance human capital formation among rural youth, especially for young women in Africa. The paper also identifies major constraints on IT access, especially the prohibitive cost of mobile phone services. Low access to capital and skills continue to constrain rural youth entrepreneurship and are likely to persist if relevant investments are not made and policy action is not taken. Drawing on the broad literature review and data analysis, the paper concludes with recommendations on policy and investments for rural youth in Africa. The paper also highlights the need for rigorous research on identified knowledge gaps.

1. Introduction

Africa[1] has the youngest and fastest-growing population in the world. The median age of the population in sub-Saharan Africa (SSA) is 18.3 years old; in Asia it is about 30 years old. Over the last decade, the population in SSA has grown at 2.8 per cent per year, double the rate of South Asia (SA), four times the rate of East Asia and the Pacific (EAP) and about 50 per cent higher than the Middle East and North Africa (MENA), the region with the second-fastest population growth rate. A large proportion of the labour force in SSA is below the age of 24 years.

Not only is Africa home to a larger proportion of young people (Figure 1), it is projected to have even more youth[2] by 2030, with most African countries predicted to experience a youth bulge within the next five decades (Population Reference Bureau, 2018; UNDESA, 2017).

Figure 1. Trends in the proportion of youth (15-24), by region, 1990-2015



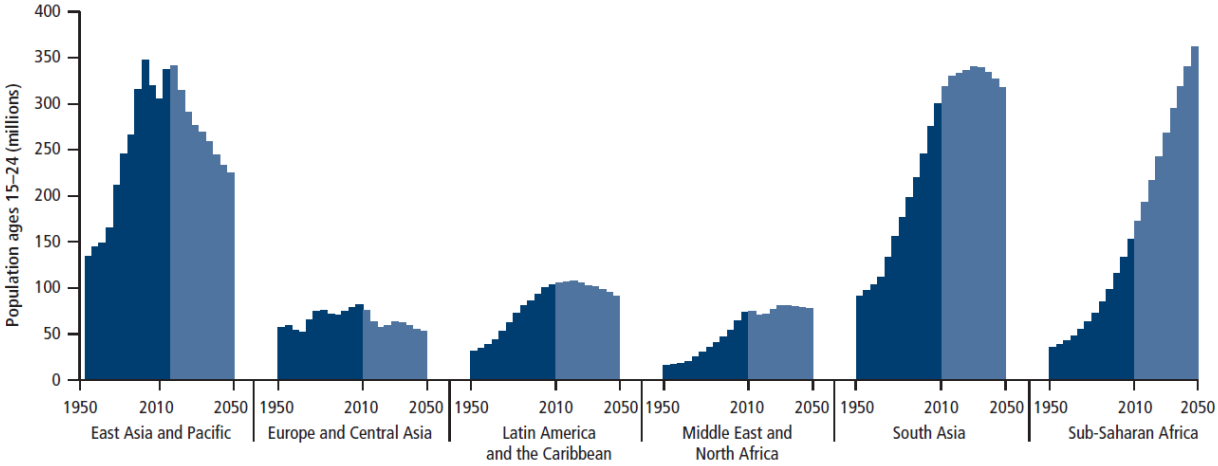
Source: UNDESA (2017).

As illustrated in Figure **2**, by 2010, about 300 million and 350 million people were aged between 15-24 in SA and EAP respectively, while in SSA this cohort comprised about only 150 million people. For EAP, the numbers are projected to decline by 2050 to 230 million people, in SA they are projected to remain above 300 million people, and in SSA they are projected to more than double to over 350 million people (World Bank and IFAD, 2017).

[1] "Africa" in this context refers to Sub-Saharan African countries in West and Central Africa (WCA) and East and Southern Africa regions (ESA), as defined by IFAD.

[2] In this paper, "youth" refers to the age category 15-24 years old. Where possible, analysis is further disaggregated to look at the age category 15-17 years versus 18-24 years, given that the former is more likely to have different agency and needs. The paper recognizes that the African Union considers youth to be between the ages of 15 and 35 years (African Union, 2006). This classification is not adopted here; rather, the age category 25-35 years is considered to be young adults, who in their own right deserve special but different attention from a policy and investment decision-making point of view.

Figure 2. Population aged 15-24, by region, 1950-2050



Source: Filmer and Fox (2014) based on United Nations (2011).

Note: Each bar shows an estimate or a projection of the number of 15- to 24-year-olds for one year at five-year intervals.

Africa is also overwhelmingly rural, with more than half of its inhabitants residing in rural areas (in some countries as much as three quarters of the national population). While migration and urbanization are on the rise, the rural population is still expected to grow, with much of it comprising youth. This makes investing in rural youth extremely important for Africa.

Despite the fact that Africa has a large number of youth in rural areas, there is limited understanding about this segment of the African population. Often policies and investment decisions that affect rural youth in Africa are not evidence-based and, at times, are based on misconceptions, conjecture and wrong assumptions about youth. This paper confronts this issue head-on by reviewing the evidence on rural youth and sustainable rural development in Africa. The motivation is to inform the Rural Development Report (RDR), 2019 – the flagship publication of the International Fund for Agricultural Development (IFAD), the theme of which is “Creating opportunities for rural youth”. It is indeed a timely and relevant theme, given the demographic transitions taking place in rural areas of developing countries and the implications for young people.

2. Methods and data

In this paper, we examine the prevailing policy narrative on youth in Africa using selected continental and national policy documents, media publications and Africa-focused youth strategy documents of donors and private sector as references. The policy documents reviewed include African Union documents on the Comprehensive Africa Agriculture Development Programme/Malabo Declaration and Agenda 2063 as well as policy documents and protocols of regional economic communities (Community of Sahel-Saharan States, Economic Community of West African States (ECOWAS), Common Market for Eastern and Southern Africa (COMESA), Southern African Development Community (SADC), East African Community, Economic Community of Central African States, Intergovernmental Authority on Development)[3]. We also review a select set of national policy

[3] The documents of the Arab Maghreb Union are not reviewed because the definition of Africa in this context refers to only sub-Saharan Africa. Arab Maghreb nations are classified as part of the Near East, North Africa and Europe region (NEN) by the IFAD classification. It is also important to note that some of the regional blocs overlap, thus including countries in different regions as defined by IFAD’s regional classification (e.g. COMESA includes Sudan, which is part of NEN, but it is predominantly composed of countries in the Africa region as per the IFAD classification; UNECA, 2018; IFAD, 2018).

documents on agriculture and youth strategies/policies. We then look at the literature for evidence on rural youth in Africa and youth in general, drawing inferences on the validity of the prevailing narrative, discourse and assumptions about youth in Africa, as they relate to rural development and the Sustainable Development Goals (SGDs) agenda. In the process, we highlight key evidence that is useful for informing investments and policies for rural youth in Africa and elsewhere. We also flag misconceptions and emphasize the need to question these and avoid making investments based on such misconceptions or assumptions.

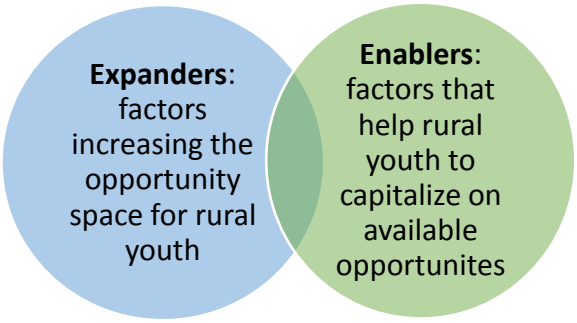
We employed a selective review of the literature on rural youth and economic outcomes in Africa to draw insights on how the numerous drivers of economic performance have changed over the years and how this is likely to be influencing the opportunity space for rural youth. A stylized conceptual framework on African rural youth and their opportunity space was developed to guide the literature review process. Searches for literature using the keywords “rural youth in Africa”, “African youth opportunities” and “rural youth unemployment” were conducted using the Google Scholar and ScienceDirect search engines. Based on the search results, the authors then matched the literature evidence with the various aspects of the narrative on rural youth in Africa that had been identified from the policy or strategy documents on youth in Africa. Further searches of literature had to be performed using keywords from the narrative on rural youth, given that the initial literature search yielded no results linked to some of the narrative on rural youth. Part of the reason for this turns out to be the lack of evidence supporting or linked to the narrative on youth.

In addition, we used a number of datasets that cover most African countries over the period 1996 to 2016 to describe the situation as it pertains to rural youth in Africa in comparison with youth in urban areas or youth in general. We assessed the relationships between rural transformation drivers and outcomes that we use as proxies of youth’s economic opportunities. Specifically, the data used consist of the World Bank’s World Development Indicators, the World Governance Indicators, the population projections of the United Nations Department of Economic and Social Affairs Population Division, the Global Findex database on financial inclusion, the Demographic Health Surveys data, the Afrobarometer surveys and Labor Force Survey data of the International Labour Organization (ILO). For a smaller set of six African countries we also use the World Bank’s Living Standards Measurement Survey – Integrated Surveys on Agriculture (LSMS-ISA) data to describe rural youth occupations (labour participation and schooling). Most data are analysed in a descriptive fashion to get a general sense of the recent trends and current statistics.

3. Conceptual framework

In this section, we develop a stylized conceptual framework on rural youth opportunity space and the factors that affect availability of opportunities and the ability of youth to take advantage of available opportunities. Conceptually, it can be useful to think of factors that expand the rural youth opportunity space versus those that enable youth to take advantage of the available opportunities (figure 3). These two subsets of factors can be viewed as being different, yet potentially overlapping. For example, new agricultural investments in rural areas might expand the available employment opportunities for rural youth, while investments that improve access to information and social networks may make it easier for youth in rural areas to take advantage of available opportunities, for instance job opportunities at an existing company. Thus, investments to expand the opportunity space for rural youth may differ from those that enable youth to capitalize on existing opportunities. Moreover, it may be worthwhile to consider those types of interventions and investments that can expand the opportunity space while enhancing the ability of rural youth to take advantage of the opportunities at the same time.

Figure 3. Typology of factors affecting rural youth opportunities and outcomes



Source: Authors' representation.

It is perhaps more important to identify those specific factors that have greater impact on youth outcomes in general, irrespective of which subset they belong to. We group these factors into three major pillars: (1) connectivity enhancements, (2) enabling environment and (3) access to productive resources and technologies.

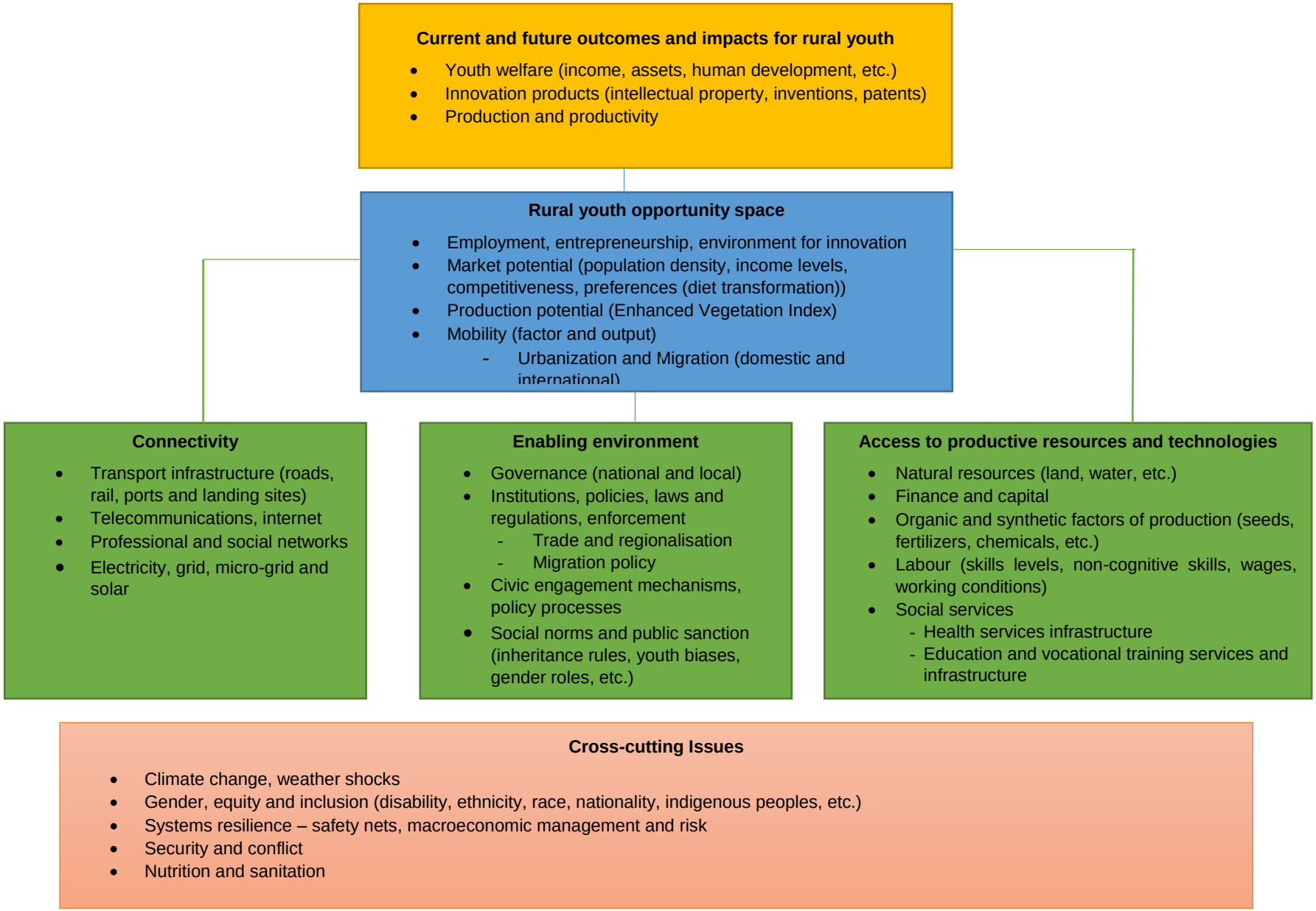
Connectivity, here, refers to things such as infrastructure capital that allows rural youth to connect to major centres of economic activity, e.g. transport or telecommunications, as well as access to essential resources such as energy (electricity, fuels, etc.), water and sanitation services. We include access to social and professional networks as another form of connectivity that we consider important for rural youth.

The second pillar, enabling environment, pertains to governance, institutions and policies, which have a bearing on economic activity and output in general. These can be at the national level as well as the local community levels, including household-level rules pertaining to youth activities and behaviours.

The third pillar looks at access to productive assets, including land, water, finance and capital, organic and synthetic factors of production such as seeds and fertilizers, and labour. As well as the three pillars, we envisage that rural youth opportunities can be influenced by cross-cutting issues. These includes issues of climate change and resilience, gender, equity and inclusion, and security. Figure 4 presents the stylized conceptual framework.

What quickly becomes apparent is that a large set of determinants of youth opportunities are general in nature and not necessarily youth-specific. In some instances, these factors may affect youth in different ways from other age categories. For instance, access to education and vocational training services and education infrastructure may be considered to be more youth-specific in the sense that older citizens are generally less likely to engage in education and training activities, as a result of life cycle considerations.

Figure 4. Stylized conceptual framework



4. The prevailing narrative on rural youth in Africa

4.1 Rural youth are unemployed

A great deal of the narrative on African youth pertains to their unemployment status. Thus, a number of youth policies and strategies developed by African countries have stressed creating job opportunities or reducing unemployment for youth. For example, under the African Union Malabo Declaration, African leaders have made a commitment to create jobs for at least 30 per cent of the youth in agricultural value chains by 2025 (African Union, 2014). The African Position on Youth Development also emphasizes job creation, as does Agenda 2063 (African Union, 2010, 2015). The latter makes reference to the lack of decent jobs, especially for youth, and recognizes that the majority reside in rural areas, implying a need to create decent job opportunities in rural areas. It also has the aspiration of "[a]n Africa whose development is people-driven, relying on the potential of African people, especially its women and *youth*, and caring for children" (African Union, 2015, p.iv). This implies relying on the skills and labour participation of youth in the economy to achieve the aspirations of Agenda 2063.

At regional level, various regional economic communities acknowledge the issues of youth unemployment and poverty in their policy and strategy documents. Many go further to implement programmes targeted at creating decent jobs and entrepreneurship opportunities for youth. For example, COMESA, with the financial support of the United Nations Volunteer Programme, is in the process of implementing a youth internship and volunteer programme aimed at creating decent jobs for young graduates (UNV, 2017). In addition, COMESA in collaboration with the African-Asian Rural Development Organization is promoting youth entrepreneurship in eight member states. Similarly, ECOWAS has established a youth empowerment and entrepreneurship programme, which will provide capital to youth from member states to invest in small- and medium-scale enterprises operated by youth (ECOWAS, 2017). This is in line with the industrialization and youth employment strategies of ECOWAS, which view entrepreneurship and industrialization as key to addressing the challenge of youth unemployment in the region (Karaki, 2017). In the case of the SADC, a youth employment promotion policy framework has been drafted, signalling a renewed effort to create jobs for young people in the region. Previous efforts within the SADC have been implemented, though at a smaller scale and mostly at country level (Mwansa et al., 1994). In the case of the East African Community, a youth policy was adopted in August 2013, which outlines the initiatives to be implemented to create opportunities for youth in the region. Youth unemployment is identified as a major issue affecting youth, and gainful employment is stated as a youth right. Poverty eradication and socio-economic integration of youth is also identified as a strategic priority area in the East African Community Youth Policy, highlighting youth poverty as an issue of concern (East African Community, 2013).

In countries where youth policies or strategies have been developed, youth unemployment surfaces again as a major issue to be addressed through the creation of jobs or engaging youth in entrepreneurship (UNDP, 2014, 2016). In general, the narrative sounds an alarm concerning the growing number of youth who will probably be unemployed if deliberate action is not taken to create employment opportunities for them. This narrative underlines the urgency for African countries to make investments that can turn the prospects of a youth bulge and unemployment into a youth dividend that spurs economic growth and transformation in Africa.

While youth unemployment is certainly an important issue, underemployment and employment in low-paying economic activities, especially in informal settings, are major challenges for youth,[4] which are not always considered explicitly in the prevailing narrative (Filmer and Fox, 2014). In this regard, we contend that the narrative on youth unemployment in Africa is not nearly nuanced enough to make it useful for designing strategies and investments for youth, particularly those in rural areas.

The policy discourse in Africa distinguishes between rural and urban youth, yet in many instances the proposed strategies or investments mostly target youth in urban areas. An exception is the discussion around investing in agriculture for rural youth. This raises the question of whether or not rural youth are receiving less attention from policymakers despite the population growth projections that suggest higher absolute numbers of youth in rural areas in Africa. Table 1 presents a selection of youth policy issues highlighted in policy documents of some of the African countries that have developed such policies. Our review of the policy documents shows that, in some cases, reference is made to youth in general without paying special attention to rural youth. The major issues that are highlighted include unemployment, entrepreneurship, agriculture, education and skills development as well as sports, culture and recreational activities for youth. Indeed, because the policy documents on youth are often developed by ministries of youth with other responsibilities such as sports and culture, there is often extensive discussion about investing in sports, arts and culture for youth.

4.2 Rural youth are exiting agriculture

Another prevailing narrative on African youth is that they are exiting agriculture and entering other sectors of the economy. Statements by global leaders have echoed this sentiment and gone as far as to claim that African youth are not interested in agriculture, because agriculture is “not attractive” or “not sexy”. Additional claims made are that youth are more interested in other sectors (including industry and services), or in white-collar jobs, and jobs that involve the use of technology and multimedia (Making Cents International, 2017; MasterCard Foundation, 2015; DOT, 2015; Mathivha, 2012). Professional interests may indeed be different from the realities that rural youth in Africa find themselves in, and while it is important to understand their interests and aspirations, to inform investments and development programmes, it is perhaps more pragmatic as a starting point, to understand the sectors that youth actually engage in. Therefore, in our analysis we review recent and forthcoming literature that shows that African youth are still primarily employed in agriculture and in fact their numbers in agriculture are predicted to rise (Davis et al., 2017; Sumberg et al., 2018; Kafle et al., 2018).

[4] Filmer and Fox (2014) point out that most Africans of working age have no access to social protection schemes such as unemployment compensation and cannot, therefore, afford not to work even if the returns to labour are very low. By 2012, about 80 per cent of SSA youth were in vulnerable employment (ILO, 2013).

Table 1. Key issues highlighted on rural youth in youth policies and strategies of select African countries

Country	Main issues featured as goal/theme	Extent of specific reference to rural youth and agriculture	Policy or strategy document	Government ministry or agency
Angola	Unemployment; education	Minor	National Youth Plan 2005	Ministry of Youth and Sports
Eswatini	Arts and culture; sports; HIV/AIDS, reproductive health; education; empowerment/civic engagement; unemployment; environment; substance abuse; peace and security	Minor	Swaziland National Youth Policy 2009	Ministry of Sports, Culture and Youth Affairs
Ethiopia	Empowerment/civic engagement; education and skills	Minor	National Youth Policy 2004	Ministry of Youth, Sports and Culture
Gabon	Unemployment; education; empowerment/civic engagement; sports	Large	National Youth Policy of Gabon 2012	Policy proposed creation of new Ministry of Youth Development, Citizenship and Society
Ghana	Empowerment; education and skills; unemployment; technology and science; ICT; entrepreneurship; agriculture; HIV/AIDS; sports	Minor	National Youth Policy of Ghana 2010	Ministry for Youth and Sports
Kenya	Entrepreneurship, unemployment; empowerment/civic engagement; education and skills; technology; health	Minor	Strategic Plan 2007-2012	Office of the Vice President; Ministry of State for Youth Affairs
Malawi	Empowerment/civic engagement; education; unemployment; technology and science; health and nutrition; sports	Large	National Youth Policy 2013	Ministry of Youth and Sports
Mauritius	Education; unemployment: ICT; agriculture; HIV/AIDS; substance abuse; sports; art and culture; environment	Large	National Youth Policy 2010-2014	Ministry of Youth and Sports
Nigeria	Agriculture; unemployment; education; gender, disability; crime; talent; conflict; HIV/AIDS and health; migration and trafficking; ICT; substance abuse; environment; sports; arts and culture	Large	Second National Youth Policy Document of the Federal Republic of Nigeria 2009	Federal Ministry of Youth Development
Rwanda	Education; unemployment; HIV/AIDS; civic engagement; substance abuse; crime; gender; environment	Large	National Youth Policy	Ministry of Youth, Culture and Sports
Sierra Leone	Unemployment; education; empowerment	Minor	National Youth Policy 2013; National Youth Programme (2014-2018)	Ministry of Youth Affairs
Zimbabwe	Unemployment; education; gender; disabilities; HIV/AIDS and health; diaspora/migration; ICT; empowerment	Large	National Youth Policy 2013	Ministry of Youth Development, Indigenisation and Empowerment

Sources: Compilation by authors from various national youth policy documents.

4.3 Human capital: more educated, inexperienced and skills mismatch

It is widely accepted that today's African youth are more educated than their parents and previous generations. This is one narrative that appears to have substantial backing in terms of evidence on enrolment rates as well as highest levels of education completed (Blum, 2007; World Development Indicators, 2018a). However, the narrative includes sentiments that youth are still dropping out of school in high rates or exiting the education system too early compared with their counterparts in the rest of the world.[5] It is believed that this is especially the case among young women, who drop out of school either because they have children at a very young age or because of social norms in rural areas that pressure them into marriage at much earlier stages in life than their counterparts in the rest of the world. Related to this is early parenthood among many young rural women in Africa. Data from the Demographic Household Surveys (DHS) programme in select African countries appear to confirm this narrative in general. We explore this issue later using previous studies and data from the DHS programme. The narrative on education in Africa also posits that African youth in rural areas are less educated than urban youth and therefore less trainable in new skills that industry may require. To the extent possible, we test the validity of this narrative as well.

A related issue is that of vocational training, internships and on-the-job training or apprenticeships. We search the literature to glean evidence on the importance of these types of training among rural youth. While the narrative has emphasized the role of less formal forms of training and skills development as effective approaches to enabling youth to become employed or start up their own businesses, we question the emphasis on youth entrepreneurship and the validity of conventional forms of training, especially in rural areas. Mostly, we highlight research gaps in this area and the need for rigorous studies that test the anecdotal evidence (World Economic Forum, 2015).

Another aspect is the argument that there exists a labour skills mismatch between available jobs and the skills possessed by youth. This issue is widely discussed at youth employment forums or debates on youth engagement in labour markets. For example, the Global Youth Opportunities Summit and the Global Entrepreneurship Summit, which are well-publicized global events, have previously featured discussions, roundtables and panels around the issue of labour skills mismatch and how to ensure that youth possess skills that match labour market demand (Making Cents International, 2017). We review the literature on this issue, first in terms of highlighting the problems of defining labour skills mismatch and the related challenge of measuring labour mismatch (McGuinness et al., 2017).

There is also a discussion on geographical mismatch of labour skills and economic opportunity, as well as the issue of labour mismatch that might arise from difficulty in predicting the skills that will be in demand in the future. The latter is a particular problem given that the skills have to be developed several years in advance through existing education systems and training programmes. In this discussion, we note the widespread discourse on improving the curricula of formal education systems in Africa, which is an issue mostly deliberated on education policy forums in Africa. Often statements are made that African youth are being educated using outdated curricula and education systems, including technical and vocational, so they do not have the necessary skills to be globally competitive.

While there is more recent work on the value of non-cognitive skills (or "character skills", as coined by Heckman and Kautz, 2013), the narrative seems to ignore this issue. Perhaps the reason for the omission is limited research on the topic in the context of rural Africa. Given that non-cognitive skills are often acquired outside school or formal education systems, it is perhaps critical to evaluate informal entry points

[5] For younger children, poor health and malnutrition lead to poor cognition and school dropout (Filmer and Fox, 2014), while for older children it is often the high opportunity costs they face (Vargas and Suttie, 2014).

for interventions that aim to increase non-cognitive skills of rural youth. Moreover, research may have to assess the relationship between non-cognitive skills and productivity as well as ability to adapt to changing conditions in labour markets. Given that it is difficult to predict the types of skills that will be in demand in the future, cognitive skills may enable rural youth to adapt to future employment skills demands.

The narrative on rural youth and job-skills mismatch also postulates that rural youth have limited experience and therefore do not meet the requirements of the labour demand that currently exist. In addition, because rural youth are inexperienced, the competition for jobs with adults who have more experience results in unemployment among rural youth.

4.4 Entrepreneurship is a pathway to rural youth employment

A part of the narrative on youth in Africa is that entrepreneurship is an effective way to address youth unemployment. The majority of statements in this regard often make reference to creating youth mentorship programmes, providing youth entrepreneurship and small and medium-sized enterprise training, and facilitating access to finance to enable youth to become self-employed and escape poverty. We review the limited literature on the topic and present descriptive statistics to shed some light on the role of entrepreneurship in creating opportunities and employment for rural youth.

4.5 Migration is a pathway to rural youth failure

Another part of the narrative on rural African youth is that they are migrating from rural areas in large numbers into “bad situations” in urban areas, resulting in their entering into criminal activities and drugs, or low-paying informal employment with limited long-term prospects. While there is evidence suggesting that rural youth are migrating, the extent to which they migrate to urban areas versus other, semirural or peri-urban, areas, and the associated positive economic and social outcomes, do not seem to feature in the policy narrative. Moreover, some migrate to urban areas within the borders of their country, yet it is often emphasized that youth are migrating to international destinations. We look into the literature and assess the evidence on rural youth migration patterns occurring in Africa and argue that, while rural youth migration is taking place, it is not occurring at the great magnitude assumed in the narrative. Moreover, it is not clear that migration of rural youth necessarily leads to increased criminal activity or better employment opportunities and outcomes. In addition, a separate phenomenon of increased anchored mobility (regular movement between geographical locations without change of residence) is concurrently taking place and potentially at a greater scale, playing an important role in creating economic opportunities for rural youth.

4.6 Rural youth lack access to productive assets

A widely accepted view is that rural youth in Africa have limited access to productive resources, including land, water, capital, access to finance and other factors of production. This is partly a result of the stage they are in, in their life cycle, in the sense that most young people would still be in the process of accumulating wealth and assets and therefore may not have access to productive resources. Accessing financial capital for investment often requires collateral, which most rural youth do not have. In addition, attitudes of decision makers at financial institutions may lead them to consider youth a riskier group to lend to, thus discriminating against rural youth even if their investment ideas and capacity may lead to profitable outcomes.

4.7 Institutions and norms are failing rural youth

Institutions and cultural norms are critical determinants of youth access to productive resources. In this regard, youth in rural Africa are often expected to farm land owned by their parents or elder relatives and they may have to wait several years before they can inherit the land. A separate but related issue is that female youth are even less likely to access productive assets because of gender disparities that persist in social norms and attitudes (Doss et al., 2015). Women often lack access to land and face greater constraints simply because the prevailing institutions and attitudes dictate patriarchal inheritance or do not expect female youth to access productive assets. Even in matriarchal societies, it is often the case that control over the productive assets, such as land, is in the hands of males within the family. In this paper, we mostly rely on the literature to illuminate the issues of land access and access to productive assets in general. Our objective is to highlight whether or not the narrative is consistent with the evidence and to what extent there is evidence of interventions and investments that effectively address some of the constraints to rural youth access to productive assets.

4.8 Youth are better positioned to leverage ICT and other technologies

As investments in telecommunications infrastructure have extended to most rural areas in Africa in the last few decades, especially for mobile phone services, so has the implied access to internet and telecommunication services. At the same time, handheld communication devices such as mobile phones have become cheaper and as a result are now more ubiquitous in rural Africa. Given this phenomenon, there is a narrative on youth and their ability to use technology, especially information technology (ICTs). Some of this narrative makes reference to technology as an effective tool for attracting youth into agriculture (e.g. agripreneurs projects of the African Development Bank and International Institute of Tropical Agriculture; African Development Bank, 2017). It also is the case that many youth policies include ICT and youth as a special theme on the basis of the assumption that youth would be better positioned to leverage technology to help them obtain employment or improve the productivity and incomes of their enterprises.

It is also often claimed that youth in Africa now have greater connectivity (broadly defined as telecommunications, internet/data). However, it is not clear if the reality is slightly different in the sense that the said services often come at exorbitant prices in rural Africa and may be prohibitive for rural youth, who are often unemployed or underemployed. In addition, the quality of service is perhaps not as stellar as might be implied by the ubiquity of access to these services.

4.9 Low youth participation in policy processes and civic engagement

It is also a commonly accepted view that African youth are not civically engaged enough and that they do not adequately participate in policy and political processes. There is a general belief that, were they to participate in these processes, their concerns would be heard and attended to by policymakers. Thus, as reiterated in most of the youth policy documents reviewed, there is an effort to increase youth participation in policy processes and provide civic education interventions. Youth empowerment is also seen as essential for Africa to achieve its aspirations outlined in Agenda 2063 (African Union, 2015). In this paper, we assess the literature on youth participation, searching for evidence of rural youth participation. We also point to the research gaps and areas for future research.

4.10 Youth are “lazy”, youth are “energetic”

A topic which seems to generate opposing views is whether youth are lazy or energetic. The narrative on rural youth is mixed on this, in some instances highlighting that youth are energetic and have physical stamina which would serve them well for engaging in employment that entails manual/physical activity. At the same time, other policy documents refer to laziness of youth, stating that they do not exhibit the same

work ethic that previous generations had. In some cases, the ubiquity of entertainment options and better access to entertainment are blamed for the laziness of today's youth. While this is indeed part of the narrative, we argue that the terms "laziness" and "energetic" are not particularly useful for understanding the opportunities for youth and their outcomes. Instead we assess the literature for evidence on youth labour productivity, as this might give insights into whether youth are lazy or energetic.

4.11 Youth engage in conflict, crime and violence

Reference is commonly made to youth engaging in conflict, crime or violence as a result of failing to obtain decent employment or for lack of opportunities to advance their education and social advancement. This part of the prevailing narrative on youth appears to have very limited empirical grounding yet in several national youth policies the narrative appears prominently. In addition, some policies discuss the issue of drugs and substance abuse by youth in African countries and point to the potential increase in this problem if issues of youth unemployment are not addressed. For instance, the African Union's Youth Charter refers to youth "abusing themselves in various ways such as substance abuse" and the expectation for youth "to develop and promote the required self-discipline" if they are "to get maximum benefits from the implementation of the Charter" (African Union, 2006, p. 6). This somehow insinuates that African youth may lack self-discipline, which would probably be a result of low non-cognitive skills development.

4.12 Youth-specific cross-cutting issues

Almost all African countries with youth policies or strategies make reference to HIV/AIDS and sexual behaviours of youth as issues of concern. The issue of HIV/AIDS is more pronounced in Southern Africa, as well as East Africa, the so-called global hotspot for HIV/AIDS infection. While HIV/AIDS may be labelled a youth issue in these parts of Africa, it is probably an issue affecting young adults as well, if not more so. We present statistics from UNAIDS to reveal that, while it is indeed an important youth issue, it goes beyond youth. In fact, HIV/AIDS is an adult issue as well. Unfortunately, the data are not disaggregated by rurality, so it is not clear whether or not HIV/AIDS prevalence is higher among rural youth than their urban counterparts. Given increased mobility, and particularly among youth, it is perhaps more important to address HIV/AIDS broadly, be it in rural or urban areas or among youth versus adults (aged 25 and older).

Climate change and resilience is a topic that is sometimes discussed with a youth-specific lens, even though it is widely considered to be a cross-cutting issue. Here, the relevance of looking at climate change and resilience from a youth perspective is that climate change is predicted to affect the agriculture sector of Africa even more in the future, when more youth are predicted to be engaged in agriculture. Thus, in the sense that the incidence of climate change effects and timing will coincide with when African youth are mostly engaged in agriculture, climate change and the resilience of agriculture is a youth-specific issue. Beyond presenting the climate change predictions and overlaying them with the predicted demography of Africa and youth labour participation patterns, this paper looks at the literature for evidence on resilience-enhancing interventions that are youth-specific. This is to help inform the types of investments for climate-proofing agriculture in a way that more effectively improves outcomes for rural youth in Africa.

4.13 Issues missing from the narrative on rural youth

While the narrative on rural youth is quite broad, it appears to miss a few salient issues that are important to consider if inclusive investments are to be made in rural youth in Africa. One issue that seems to get limited coverage is disability and special needs. Rural youth with disabilities and special needs face unique challenges that are often overlooked and not discussed in policy arenas. This segment of the rural youth population in Africa often does not have access to the facilities and support necessary to enable

them to actively participate in the economy and to achieve their full potential (Groce, 2004). As a result, the opportunity space of rural youth with disabilities and special needs is even more constrained and can lead to rural youth with disabilities and special needs being a burden on their relatives and communities (WHO and World Bank, 2011). Part of the problem is the lack of adequate investments specifically targeted at this population. Another challenge is the lack of data and statistics on disabled youth in general.

At community level, society tends to believe that youth with disabilities or special needs are relegated to being taken care of and cannot contribute economically. In addition, it is argued that the lack of role models may make this perception persist both in society and among youth with disabilities and special needs. The World Report on Disability (WHO and World Bank, 2011) makes a compelling case for the potential of people with disabilities and special needs and the importance of investing in youth with disabilities. Such a case is mostly missing in the narrative on rural youth in Africa.

Another issue that seems to be missing or is at most considered implicitly in the narrative on rural youth in Africa is the informality of occupations they engage in. National governments acknowledge that large proportions of their youth participate in informal forms of employment and yet many investments and policies do not directly target the informal sectors. What to do with the informal nature of jobs for rural youth, and youth in general, in Africa is not quite clearly articulated in policy documents. Even more importantly, the kinds of investments to make that would enable the informal sector to thrive and deliver on outcomes for rural youth in Africa are not discussed much.

5. The evidence

5.1 Challenges and opportunity space for rural youth in Africa

In this section we present evidence on the challenges and opportunity space for rural youth in Africa, comparing it with the narrative on youth discussed earlier. Throughout, we keep in mind a life cycle and youth prospects perspective. We contend that life cycle considerations and youth prospects thinking ought to form the basis of any discussion on youth. While youth may be expected by society to perform certain functions, or in fact do engage in a variety of activities, some occupations they engage in are not necessarily optimal for them in the long run, given the life cycle stage they are in. It is the case that some youth in rural Africa do engage in activities typically carried out by older people simply out of necessity or because there is limited support for them to engage in those activities that youth would typically engage in to enhance their prospects.

We begin by discussing the importance of education, learning and skills development, which, we argue, should be the main activity of occupation for youth, irrespective of the situation they find themselves in (i.e. in rural or urban areas, in formal schools, universities or vocational schools, unemployed or employed, operating enterprises formally or informally, etc.). Through continued education, learning and skills development, including of non-cognitive skills, youth are more likely to set themselves up for a better future.

Education, learning and skills development

One major challenge that rural youth in Africa face is leaving school too early. Improvements in education indicators such as school enrolment and school attendance have been highlighted across Africa, but there are still issues on education including low secondary school attendance and completion rates, as well as low quality of learning (World Bank, 2018b).

The improvements that have been witnessed in school attendance rates in Africa are reflected in various data sources including the World Bank's LSMS data. These data show relatively high percentages of

school attendance among children (aged 6-14 years) and younger youth (aged 15-17) (Table 2). The data also reveal heterogeneity, with countries such as Malawi, Nigeria and Uganda recording higher school attendance rates of more than 80 per cent for children and more than 70 per cent for younger youth. Other countries exhibit lower school attendance rates, with some as low as 44 per cent for younger youth. This underlines the importance of customizing education interventions and investments for each country in Africa to effectively target children and younger youth of school age.

Statistics also show heterogeneity in gender disparities in school attendance, with countries such as Malawi, Tanzania and Uganda having slightly lower school attendance rates for female youth aged 15-17 while Ethiopia does not have statistically significant disparities in school attendance for either youth aged 15-17 years or younger children aged 6-14 years. This probably implies different interventions and investment needs in education for these countries.

One striking result from our analysis is a general drop in school attendance rates for younger youth compared with children. While a drop occurs in all countries, it is heterogeneous, ranging from 4 per cent in Ethiopia to 33 per cent in Tanzania. This evidence is probably an artefact of improvements in education systems, which the younger cohorts were exposed to but not the younger youth. It could also highlight the general school dropout problem around the ages of 15-17 years of age for all countries. To properly assess if school dropout rates are high between the ages of 15 and 17 years, panel data would need to be analysed, as such data track the same individuals over time.

Gender differences are also noted in the drop in school attendance rates for young youth, with young women showing a greater drop in percentages than young men in Tanzania, Malawi, Uganda and Ethiopia. The converse is observed in Nigeria and Niger, where the percentages for young men exhibit a larger drop compared with children aged 6 to 14 years. In general, these results call for attention to gender disparities in school attendance rates.

Table 3 shows the percentages of youth aged 18 to 24 years that have completed primary school education and those that have completed secondary school education. Again heterogeneity is observed, with countries such as Nigeria exhibiting high primary and secondary school education completion rates, while other countries generally present lower completion rates, especially for secondary school education. These low secondary school completion rates begin to shed light on school dropout rates for the older cohorts that are between the ages of 18 and 24 years.

Most notable in the statistics is the significant gender disparity in completion of secondary school education. Young women are less likely to have completed secondary school education in most African countries, with the exception of Tanzania, where young women actually have higher rates for both primary school and secondary school completion. In the case of Niger, secondary school completion rates are generally low for both males and females.

Table 2. School attendance among children and youth in select African countries

Country	**Proportion of children aged 6-14 currently attending school**			
	Male	**Female**		**Total**
Ethiopia	0.712	0.712		0.712
Malawi	0.880	0.909	***	0.895
Niger	0.525	0.498	**	0.512
Nigeria	0.813	0.791	**	0.803
Tanzania	0.738	0.775	***	0.756
Uganda	0.893	0.890		0.892
	Proportion of youth aged 15-17 currently attending school			
	Male	**Female**		**Total**
Ethiopia	0.674	0.667		0.671
Malawi	0.808	0.764	***	0.786
Niger	0.431	0.455		0.443
Nigeria	0.720	0.745		0.730
Tanzania	0.464	0.441		0.453
Uganda	0.765	0.747		0.757
	Difference in school attendance rates between youth aged 15-17 and children aged 6-14			
	Male	Female		Total
Ethiopia	-0.038	-0.045		-0.041
Malawi	-0.073	-0.144	***	-0.108
Niger	-0.094	-0.043	***	-0.069
Nigeria	-0.094	-0.046	***	-0.073
Tanzania	-0.274	-0.333	*	-0.303
Uganda	-0.129	-0.143	*	-0.135

Asterisks show statistical significance in differences between males and females, based on chi-square tests at 0.1 (*), 0.05 (**) and 0.01 (***) alpha levels.

Source: Authors' calculations using World Bank LSMS survey data (2010-2016).

Table 3. Primary and secondary school education completion rates among African youth aged 18-24 years

Country	Primary school completed				Secondary school completed			
	Male	Female		Total	Male	Female		Total
Ethiopia	0.460	0.456		0.458	0.094	0.135	**	0.115
Malawi	0.598	0.542	*	0.568	0.214	0.175	**	0.193
Niger	0.331	0.267	**	0.298	0.134	0.121		0.127
Nigeria	0.876	0.806	**	0.847	0.561	0.524	**	0.545
Tanzania	0.499	0.614	**	0.562	0.126	0.166	**	0.148
Uganda	0.310	0.314		0.312	0.150	0.114	**	0.133

***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Source: Authors' calculations using World Bank LSMS survey data (2010-2016).

A comparison of Table and Table 3 shows that secondary school attendance rates do not translate to high completion rates in the African countries analysed. This is an issue that will need to be addressed to improve opportunities for youth in rural Africa.

Beyond attending school and completing secondary school is the more fundamental issue of learning, which has been highlighted in the World Development Report 2018 (World Bank, 2018b). The extent to which useful learning is actually taking place when students attend school is not well understood, particularly in rural Africa. Given this, investments to increase learning and not just school attendance will need to be made if rural youth in Africa are to improve their prospects for employment and productivity.

Learning outside school is another entry point for improving rural youth outcomes. Recent evidence from a randomized control trial in Uganda shows that multifaceted training interventions that take place outside school (in community-level clubs) and focus on both life skills and vocational training can tremendously improve outcomes for young women (Bandiera et al., 2017). The Empowerment and Livelihood for Adolescents (ELA) intervention, evaluated by Bandiera et al. (2017) in Uganda, comprised a two-year vocational and life-skills training programme for adolescent girls and was found to have increased the likelihood of adolescent girls engaging in income-generating activities by 48 per cent and reduced teenage pregnancy by 34 per cent. In addition, it reduced the likelihood of adolescent girls entering into early marriage or cohabitation by 62 per cent. Apart from being an out-of-school educational intervention, the positive impact of the intervention is attributed to its length (two years). In essence, such programmes need to last a long time to achieve the positive impacts.

Other out-of-school entry points for youth skills development, especially for non-cognitive skills, include youth sports clubs and religious organizations such as churches and mosques, which are spread throughout rural areas in Africa. While there is limited evidence on the impacts of these types of avenues for youth skills development in rural areas, Puffer et al. (2016) begin to shed some light, suggesting that these can be very important community-level institutions for developing non-cognitive skills of youth and preparing them for adulthood. In a clustered randomized control trial administered in rural Kenya, Puffer et al. (2016) find that a family- and church-based intervention for adolescents and caregivers in rural Kenya improved family relationships, reduced risky sexual behaviours and promoted mental health. Additional research and in particular impact evaluations are still needed to better understand the role of such institutions in addressing a number of rural youth issues, including education, learning and skills development.

Unemployment and labour participation

A common challenge that rural youth across Africa face is unemployment and/or underemployment. This in turn presents a major constraint to achieving other development outcomes for youth. Evidence from labour force surveys and the School-to-Work Transitions suggest that unemployment rates are not as inflated as the narrative tends to describe (ILO, 2017). For the most part, the youth labour force is engaged in some work, albeit low-paying in nature, and often in farming.

Table 4 presents statistics on labour participation rates for selected African countries and shows that, with the exception of a few countries such as Nigeria and Senegal, labour participation among rural youth is high (mostly above 45 per cent). While there certainly are gender disparities in labour participation, these are heterogeneous across countries and for the most part both young men and women are not unemployed. Thus, while unemployment is the key feature in the narrative on rural youth and indeed a genuine concern, the greater challenge for rural youth in Africa appears to be underemployment and engagement in low-paying, non-decent jobs (ILO, 2017).

Table 4. Labour force participation rates for selected African countries (by age, gender and rurality)

	15-24 years				25-54 years			
Country (year)	**Males**		**Females**		**Males**		**Females**	
	Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**
Angola (2011)	73.4	47.5	81.4	42.5	97.5	93.2	96.6	81.5
Benin (2011)	43.7	32.3	54.0	40.2	97.0	93.7	84.7	81.4
Burkina Faso (2014)	65.5	43.5	49.4	35.0	88.2	89.4	68.9	71.8
Côte d'Ivoire (2016)	55.5	30.5	36.9	28.9	85.5	83.4	60.0	61.5
Gambia (2012)	49.2	43.8	44.0	31.2	81.3	89.4	59.8	63.4
Ghana (2013)	67.3	43.7	64.2	42.0	95.1	93.9	91.3	85.5
Malawi (2013)	69.8	49.9	66.8	41.4	95.2	93.9	83.6	72.6
Mali (2015)	72.8	41.8	64.2	39.7	96.7	95.1	70.4	62.6
Mozambique (2015)	51.2	73.5	42.3	82.4	91.2	95.1	80.2	95.5
Niger (2011)	94.5	48.8	70.0	19.6	99.0	90.0	81.1	52.4
Nigeria (2013)	29.0	20.2	22.3	19.3	79.0	81.2	62.6	69.4
Rwanda (2014)	68.9	53.3	68.9	52.7	96.2	94.1	97.4	82.7
Senegal (2015)	45.3	21.2	26.3	18.1	76.6	74.7	40.1	46.0
Tanzania (2014)	83.1	59.5	81.4	55.7	97.3	96.7	92.0	82.9
Togo (2011)	76.3	48.3	75.2	50.5	94.5	86.1	90.6	79.2
Uganda (2012)	58.1	46.9	52.9	44.7	89.3	93.1	79.8	80.0

Source: ILO (2017) – labour force surveys and other household surveys.

Table 5. Individual labour allocations by age category

Age category	Wage employment	Non-farm business	Farming	School	No activity reported
Ethiopia					
15-24	8	11	46	43	22
25-34	6	11	50	5	33
35-44	5	12	52	1	34
45+	4	8	49	0	42
Tanzania					
15-24	19	11	70	23	12
25-34	33	26	78	2	7
35-44	31	30	85	0	4
45+	25	22	87	0	6
Uganda					
15-24	18	9	77	51	4
25-34	31	31	72	2	3
35-44	34	36	79	0	3
45+	17	23	83	0	10
Nigeria					
15-24	3	9	23	51	25
25-34	8	33	28	7	33
35-44	11	43	40	2	23
45+	10	31	50	0	27
Niger					
15-24	1	8	66	38	17
25-34	1	17	69	15	19
35-44	1	22	74	11	16
45+	1	21	68	5	24
Zambia					
15-24	4	3	68	51	7
25-34	16	25	89	6	4
35-44	19	34	91	3	3
45+	11	24	87	3	9
Burkina Faso					
15-24	6	29	53	21	18
25-34	7	46	62	4	14
35-44	6	50	67	3	12
45+	3	35	59	3	25

Source: Sumberg et al. (2018).

Evidence from Sumberg et al. (2018) based on LSMS data and complementary household survey data shows that most youth (as well as young adults, for that matter) are farmers. **Table 5** is an excerpt from Sumberg et al. (2018) revealing labour participation rates by age category and type of occupation (including schooling) in the countries analysed. The statistics reveal that schooling is the second most significant form of occupational activity for youth, while wage employment and non-farm business operation are less significant.

Other studies have also used the LSMS datasets to show that rural youth are employed in agriculture, often farming land owned by their parents or relatives. Yeboah and Jayne (2018) show that, while the proportion of labour force in agriculture has sharply declined in the nine African countries analysed, it remains significantly high. When measured in full-time equivalents, approximately 39.9 per cent of youth labour participation in Ghana is in farming, while for the other African countries analysed the proportion is even higher (e.g. 63.2 per cent in Tanzania). The off-farm segments of the agrifood system are found to be increasingly absorbing youth labour but the proportions are significantly lower (7.8 per cent in Zambia and 17.8 per cent in Ghana).

Kafle et al. (2018) also find that 59 per cent of Tanzanian rural youth are consistently engaged in farming, while in Malawi that number is 56 per cent. This confirms that the majority of rural youth are farming. In addition, the mean age of farmers in these countries is calculated to be about 31 years, dispelling the myth that the average age of the African farmer is in the sixties and that there is a need to attract youth into farming. Furthermore, Kafle et al. (2018) present evidence on mobility between sectors over time. More than 57 per cent of the youth not involved in the agrifood system during the baseline are found to enter the sector in the subsequent wave, and 12 per cent of the youth involved in the agrifood system during the baseline move out of the sector in the subsequent wave. Moreover, evidence shows that, out of necessity, youth often engage in multiple jobs over the course of the same year (Kafle et al., 2018; Yeboah and Jayne, 2018). In most African countries, this is necessitated by seasonality of labour demand in agriculture, given the high dependence on rainfed production systems. Accordingly, youth are forced to engage in other sectors in addition to agriculture, especially during the dry season. This points to the potential of irrigation investments in keeping rural youth employed in agriculture, even during the dry season. This would also allow rural youth to specialize in fewer activities, potentially resulting in improvements in skills and productivity.

The multiplicity of labour participation denies rural youth the opportunity of specialization, which can also be detrimental to their prospects as noted by Banerjee and Duflo (2007). By engaging in multiple jobs for short periods of time, youth are less likely to gain experience in a particular area or fully learn a specialized skill. This probably has implications for their future labour participation, productivity and associated earnings.

While non-farm employment in Africa features as a growing form of labour participation in general, the percentage of youth engaging in non-farm rural employment is still significantly lower than in agriculture. The same is true of the percentage of youth engaging in self-employment in the informal sector, but even more so in wage employment. Fox and Thomas (2016) show that this structure is unlikely to change significantly in the coming decades and they predict that only 37 per cent of labour productivity changes will be attributed to movement of labour out of agriculture. Similarly pessimistic estimates are presented by McMillan et al. (2014) and Rodrik (2015). This is a result of a very sluggish demographic transition in Africa, characterized by a very slow pace in labour shifts out of agriculture into manufacturing and other sectors. Thus, if substantial opportunities for rural youth employment are to materialize, investments will have to focus on enhancing productivity in agriculture and addressing the demand-side aspects of labour markets (Fox et al., 2016).

In related work, Davis et al. (2017) explore income-generating activities of 41 sub-Saharan African countries, using the Rural Income Generating Activities (RIGA) database constructed from the World Bank's LSMS survey data. They find that, for the majority of cases, agriculture is the main source of

income. Using LSMS-ISA data, Baulch et al. (2018) also find similar detailed evidence in the case of rural youth in Malawi.

Thus, despite the heterogeneity across African countries, there is ample evidence showing that rural youth in Africa are farming and that the proportions of youth labour forces expected to be farming in the coming decades will remain high, albeit declining in the long run. Based on this burgeoning evidence, we can definitively say that the narrative on youth leaving agriculture en masse is unfounded. On the contrary, the absolute numbers of African youth that will farm in the coming decades are expected to rise, yet there will be additional constraints on the farm sector including pronounced climate change and resource scarcity. Thus, it behoves policymakers and development partners to make investments in agriculture for rural youth in Africa, especially in ways that can reduce underemployment and improve productivity in the context of climate change.

To that end, Fox and Kaul (2018), through a review of the evidence, highlight promising approaches for addressing youth unemployment such as providing capital/cash transfers to youth and supporting the development of transferable character skills and social integration of youth. Their review also finds little or no impact of training programmes, which tend be popular yet costly. This suggests that alternative interventions may offer better prospects for rural youth employment. Still, further research is needed to better understand what works in addressing rural youth unemployment and underemployment.

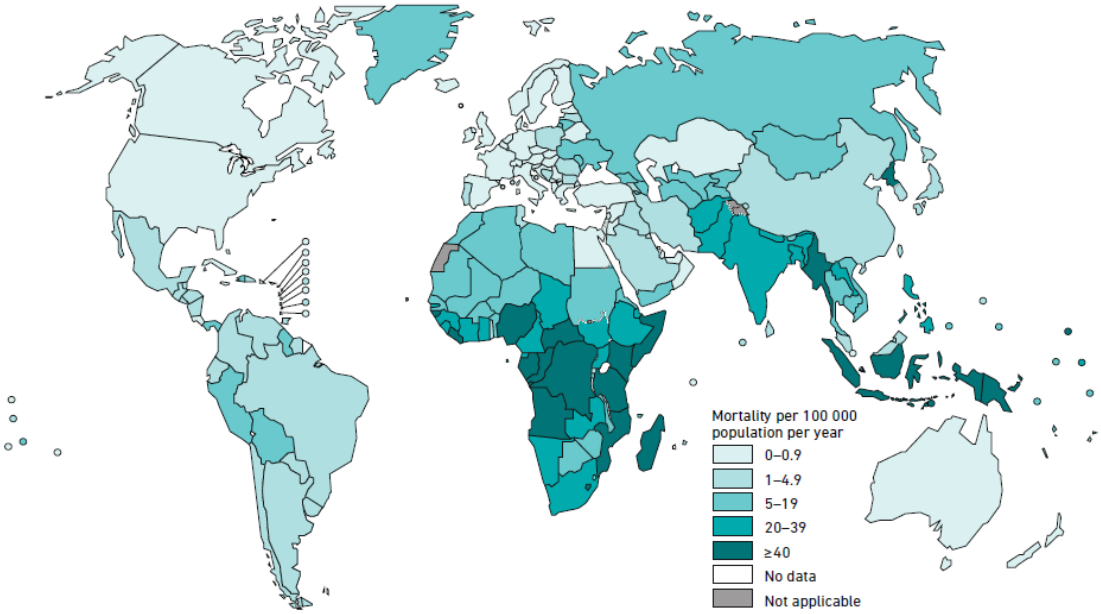
Labour productivity: are rural youth "energetic" or "lazy"?

The narrative on rural youth in Africa seems to be mixed on whether youth are "energetic" or "lazy" compared with other age cohorts, suggesting a lack of consensus on the topic. Both terms ("energetic" and "lazy") are not particularly useful for analysis of economic outcomes, especially since there are no clear metrics to measure them. Therefore, to explore this aspect of the narrative on rural youth, our inquiry turns to the issue of youth labour productivity instead.

McCullough (2017) shows that labour productivity in agriculture in several African countries is generally low, though not as low as national accounts would imply. Instead, the discrepancy between labour productivity measured using microdata and national accounts may be a result of underemployment, as observed by fewer hours worked in agriculture, in addition to measurement error. Gollin et al. (2014) also show that indeed labour productivity in agriculture is low, especially among developing countries, particularly in sub-Saharan Africa. However, they contend that the lower labour productivity may be due to labour quality issues (low skills) in addition to measurement error and the fewer hours worked in the sector. These two studies, while not entirely consistent, suggest that low labour productivity in Africa may emanate from multiple factors other than measurement error. Given that a significant proportion of the labour force in Africa is between the ages of 15 and 24 and that a large proportion is located in rural areas and engaging in agriculture, it can be deduced with reasonable confidence that rural youth in Africa exhibit low labour productivity, in part due to underemployment and low skills levels.

Other human capital determinants might also explain the low labour productivity observed in Africa, including health issues such as tuberculosis (TB), HIV/AIDS and malaria, which disproportionately affect the African continent (WHO, 2017a,b). Youth policy discourse in Africa often makes reference to higher HIV/AIDS infection rates as an issue among African rural youth, particularly in the Southern and East African hotspots of the pandemic. Figure **5** shows the preponderance of TB mortality in sub-Saharan Africa relative to the rest of the world, coinciding with where labour productivity ranks lowest as presented by Gollin et al. (2014).

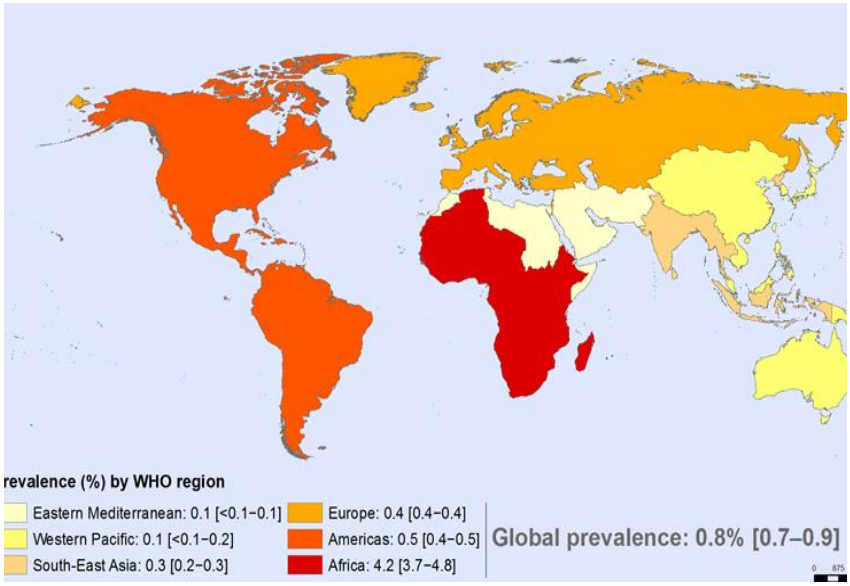
Figure 5. Estimated mortality of TB cases (all forms, excluding HIV) per 100,00 population, 2016



Source: WHO (2017a)

On HIV/AIDS and its likely contribution to low labour productivity, microdata analysis generally finds that productivity losses associated with the HIV/AIDS pandemic are not specific to youth but are generic in nature (Fox et al., 2004; Bloom and Canning, 2000; Chapoto and Jayne, 2008). The prevalence of the HIV/AIDS pandemic is concentrated in sub-Saharan Africa, especially in Southern and East Africa (Figure **6**). Thus, while it can be expected that HIV/AIDS will contribute to low labour productivity in Africa, it is unclear if this would disproportionally affect rural youth.

Figure 6. Global prevalence of HIV/AIDS in 2016

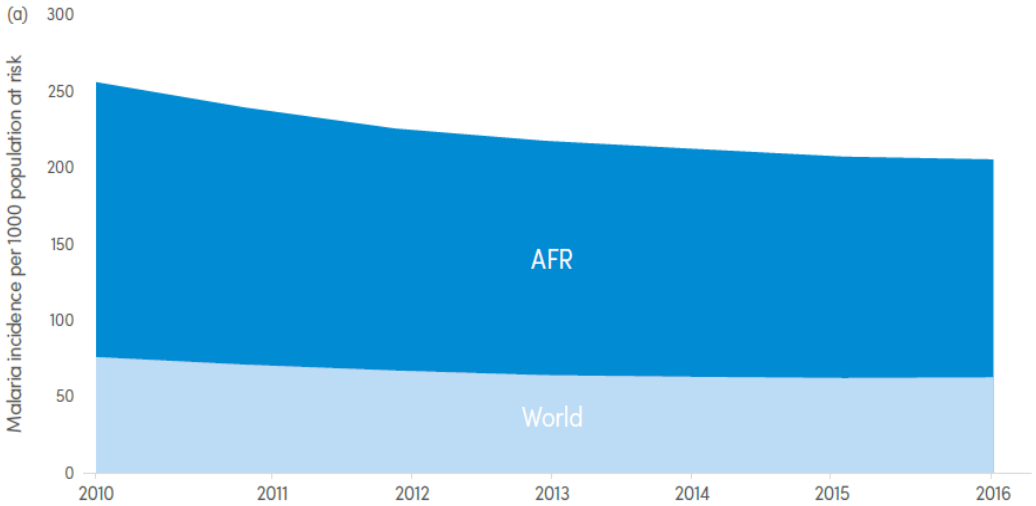


Source: WHO (2017a).

Evidence on the impact of malaria on farm productivity also points to similar implications, suggesting that diagnosis and treatment of the disease would generally lead to increases in labour productivity (Dillon et al., 2014). While malaria is understood to be predominant in rural areas, there is no evidence available to

suggest that these impacts may disproportionately affect rural youth. Figure 7 illustrates the malaria burden on the African continent, demonstrating, together with **Figure 5** and Figure **6**, the triple-disease burden that is likely to have significant implications for labour productivity in general and perhaps specifically for rural youth in Africa.

Figure 7. Malaria incidence in Africa relative to the rest of the world



Source: WHO (2017b).

The comorbidities of these major diseases, along with the fact that mortalities may induce rural youth in Africa to take up household-head responsibilities earlier than normal, including caring for the sick, make it reasonable to believe that youth labour productivity may be low as a result of many health-related issues in rural Africa. Rigorous analysis of the role of major diseases in low youth labour productivity is needed to better understand the implications for youth opportunities and economic outcomes, and more importantly to identify entry points for interventions and investments that can enhance youth prospects and labour productivity in rural Africa.

The narrative on youth in Africa sometimes describes youth as engaging in substance abuse, which, policymakers argue, leads to lower levels of labour productivity. Available data from WHO show alcohol use disorder for all groups aged 15 to 49, highlighting the need for age-disaggregated data. Table 6 presents estimates of alcohol use disorder disaggregated by sex in selected countries for 2016. What is apparent is that alcohol use disorder is relatively lower in most African countries than in developed countries, which on the other hand have higher labour productivity. This would suggest that high alcohol use disorder may not necessarily be associated with low labour productivity. Furthermore, there are gender differences, with males experiencing higher alcohol use disorders than women across the board, yet women tending to have less opportunities and experience lower economic mobility outcomes.

The estimates are quite heterogeneous among African countries, suggesting other underlying causes of these figures, e.g. the dominant religion of a country has been hypothesized to influence alcohol use. Moreover, questions have been raised about the quality of the data and comparability across continents; in particular the African data, which may have underreporting problems. Irrespective, empirical quantitative data collection and analysis is needed to further elucidate the relationship between alcohol use disorder and labour productivity. Overall, the literature lacks adequate quantitative estimates on the abuse of various substances in general, preventing us from making conclusive statements on the role of substance abuse on youth opportunities and productivity in rural Africa.

Table 6. Alcohol use disorder estimates for selected countries, 2016

Country	Male	Female	Both sexes
Russian Federation	36.9	7.4	20.9
Belarus	33.9	6.2	18.8
United States of America	17.6	10.4	13.9
Côte d'Ivoire	15.6	4.1	10.0
Togo	15.1	4.0	9.5
United Kingdom	13.0	4.7	8.7
Canada	12.0	4.1	8.0
Uganda	12.4	1.9	7.1
Cameroon	11.8	2.3	7.0
France	11.1	3.1	7.0
Rwanda	12.2	2.5	7.0
South Africa	12.4	1.8	7.0
Argentina	10.8	3.0	6.8
Equatorial Guinea	11.2	2.0	6.8
Germany	9.8	4.0	6.8
Tanzania	11.5	2.2	6.8
Benin	10.8	2.1	6.4
Zimbabwe	11.1	2.0	6.4
Zambia	9.8	1.2	5.5
Philippines	8.8	1.8	5.3
Jamaica	8.2	2.3	5.2
Democratic Republic of the Congo	9.1	1.0	5.0
Brazil	6.9	1.6	4.2
Ghana	7.3	1.0	4.1
Kenya	7.1	0.9	4.0
Malawi	6.3	0.7	3.5
Mozambique	5.9	0.7	3.2
Ethiopia	4.5	0.5	2.5
Nigeria	1.1	0.1	0.6

Source: Global Information System on Alcohol and Health (WHO, 2017a).

Migration and mobility as rural youth opportunities

Migration is an important part of structural and rural transformation of economies of the world (Lucas, 1997; Stark and Lucas, 1988; Clemens, 2017). This is certainly the case in the African context (Lucas, 2015). De Brauw et al. (2014) analyse rural-urban migration as it relates to structural transformation in SSA and show that the proportion of people in rural areas is negatively correlated with GDP per capita. This is partly explained by a higher proportion of individuals engaging in agriculture in rural areas, a sector which exhibits lower productivity than other sectors of the economy. Thus, as structural transformation takes place it would be expected for rural labour to migrate to other more productive sectors and as part of that process migrate to urban and peri-urban areas (McMillan et al., 2014). Kessides (2006) shows that, while urbanization in Africa is taking place at a fast pace, the root cause of urbanization is not rural-urban migration but natural growth as a function of high fertility rates. In essence, rural-urban migration in SSA is not occurring at as great a magnitude as implied by the policy narrative.

Lee and Mueller (2016) show that migration of African youth outpaces the migration of adults. This confirms that rural youth constitute a significant proportion of migrants from rural areas in SSA. Mercandalli and Losch (2017) show that the bulk of migration in SSA is within SSA. While heterogeneity exists, most migrants migrate to neighbouring countries or stay within their countries' borders. Thus, if migration and related investments are to be leveraged for improving opportunities and outcomes of rural youth, they would be well served by focusing on internal and regional migration.

The economic benefits of migration, especially on the part of migrants from rural areas in Africa, have been evaluated. Beegle et al. (2011) and de Brauw et al. (2018) present quantitative evidence to that effect from Tanzania and Ethiopia, respectively. Beegle et al. (2011) estimate that Tanzanian households experienced a 36 percentage point increase in consumption growth as a result of migration, while de Brauw et al. (2018) show a 208 per cent increase in non-food consumption among Ethiopian individuals who migrated internally from rural areas, relative to those who did not migrate.

The effects of migration from rural areas on the remaining households and individuals are somewhat varied and not well studied. Mueller et al. (2018) show evidence of labour shortages occurring as a result of migration from rural households. After migration of the household head, households increase the supply of existing family labour in the form of child labour on the farm.

On the other hand, the evidence on remittances shows the critical role that migrating populations can play for remaining household members, and, given the evidence that youth constitute a majority of migrants in SSA, this suggests that rural youth migration can be particularly beneficial in terms of both creating employment for the migrant youth and generating benefits for youth that remain, especially siblings. For example, remittances can be instrumental in paying for school fees and providing food and other needs for younger relatives of migrants (Carbone, 2017). In some cases, rural migrants may also invest in their rural communities using increased earnings that arise from migration. While such activity has been reported, there appears to be limited rigorous evidence on the matter.

Apart from migration, general mobility is seen as a key to unlock economic opportunities for rural youth in Africa (Adey, 2009; Porter, 2002). Here, the difference from migration is that youth may remain in the rural areas but engage in regular travel to urban areas for economic activity. This type of movement of labour, in the African context, is different from the daily commuting often observed in high- and middle-income countries, as it entails several days or weeks of absence from the rural areas. In addition, it is closely tied to trade activity, and in the majority of cases informal trade between rural and urban areas. In other cases the trade may be between countries, especially regional trade within Africa. The extent to which rural youth in Africa engage in this form of mobility or quasi-migration, in search of economic opportunities, is not well understood. Nonetheless, anecdotal evidence suggests that this is probably increasing with time as rural transformation progresses.

Rural youth entrepreneurship

While youth entrepreneurship has been touted a vehicle for mass youth employment, with governments and development partners creating myriads of programmes to encourage youth to establish start-up companies, few question this rationale. First, evidence from most of the world, including developing countries, shows that while nascent entrepreneurship is negatively associated with age (Lamotte and Colovic, 2013; Lévesque and Minniti, 2006, 2011) the mean and median ages of entrepreneurs are much older than the age of youth in Africa (certainly above 30 years, and above 40 years in most developed countries; see Table 7).

Table 7. Mean and median ages of entrepreneurs in select countries of the world, 2010

Country	Mean age	Median age	Standard deviation of age	Maximum age	Minimum age
Angola	30.4	27	11.2	84	15
Australia	44.2	43	17.2	89	18
Bolivia	34.7	32	12.5	64	18
Brazil	37.0	35	13.3	64	18
China	39.1	39	12.0	64	18
Denmark	38.0	36	11.9	64	18
Egypt	38.6	37	13.4	64	18
Germany	42.7	44	12.7	64	18
Ghana	35.2	33	11.3	65	15
Jamaica	38.2	37	12.3	64	18
Japan	46.4	46	13.2	90	18
Netherlands	54.2	55	18.4	96	18
Pakistan	34.1	32	11.8	64	18
Tunisia	36.6	35	12.6	64	18
Turkey	38.0	37	12.8	64	18
Uganda	33.0	30	11.3	64	18
United Kingdom	49.6	50	16.5	80	16
United States	52.1	52	17.9	95	18
Zambia	32.2	30	11.5	87	15

Note: See table A.1 in the appendix for a full set of countries for the available data.

Source: Global Entrepreneurship Monitor (2010).

Second, most successful enterprises are in fact started by adults and not youth (Azoulay et al., 2018; Global Entrepreneurship Monitor, 2017). In part, this is due to the experience and assets that older adults will have amassed over time, making them more shrewd and apt business operators. This would suggest that interventions aimed at increasing successful entrepreneurship might be better off targeting young adults and older adults.

While there may be merit in encouraging youth to start up businesses, especially if they are provided with the necessary support and assets, it is perhaps more prudent to allow them to gain experience even if they are not running their own enterprises. The evidence raises the question of whether or not advocating for a large proportion of African youth to start up businesses is expecting too much of them and whether or not this would expose them to a high risk of business failure.

Nagler and Naude (2017) present new evidence on rural non-farm entrepreneurship in six African countries and show that nearly 42 per cent of the rural households analysed operate some non-farm enterprise. Heterogeneity is observed, with 61.7 per cent of the households in Niger operating a non-farm enterprise while in Malawi the percentage is only 16.9 per cent. While Nagler and Naude do not disaggregate their analysis by age of enterprise operator, it is safe to say that in African countries the proportion of rural youth engaging in non-farm entrepreneurship is likely to be high, given that a large percentage of households in rural areas consists of youth. With this evidence in hand, the question to ask is what to do with the youth who have already started engaging in entrepreneurship. If evidence suggests that they are less likely to succeed, perhaps customized interventions should be designed to support them to be successful in the long run or to enable them to exit failing entrepreneurship and enter more remunerative employment or education. More evidence will be needed on this topic to better inform investments for youth already engaging in entrepreneurship.

Janssens et al. (2018) present new evidence on women's participation in non-farm enterprises in rural Ghana and show the positive impacts this has on investments in child education, specifically high school education. Percentages of women engaging in non-farm enterprises are shown to be relatively high, again pointing to transitions in labour force participation among rural women in Africa. Given these limited studies, not much can be concluded except that more research is needed to better understand the transitions taking place in rural Africa as they pertain to youth and female entrepreneurship. The available anecdotal evidence suggests merit in investing in transitions in general, for example to allow rural women to engage in non-farm economic activities including non-farm enterprises. It is, however, not clear if younger women would necessarily benefit more from increased engagement in entrepreneurship.

Access to productive assets and finance

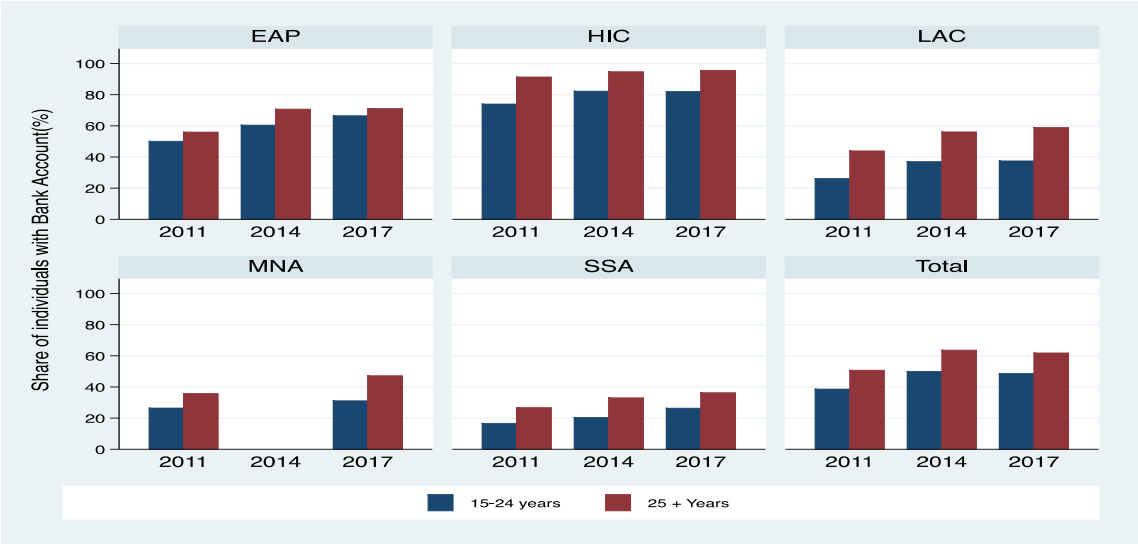
For multiple reasons, rural youth face greater constraints to accessing productive resources. Given population increase and increasing life expectancy, coupled with unchanging rules of inheritance, access to productive assets such as land through bequest is becoming less likely for rural youth. The area of land that rural youth can expect to inherit is also likely to be smaller than what their parents inherited, simply as a result of increasing population density and land fragmentation (Bezu and Holden, 2014). Rural youth may have to share the land inheritance with several siblings, given that fertility rates have remained relatively high in rural Africa. In addition, they may have to wait longer than their parents had to, to inherit land or any other productive assets. Given this multitude of constraints, rural youth without access to productive assets, especially land, are more likely to seek alternative livelihoods, which often include migration (Kosec et al., 2017; Bezu and Holden, 2014). Thus, some have advocated reforming institutions to allow for *in vivo* inheritance of land while linking this to provision of social protection for the elderly who bequeath their productive assets *in vivo*.

Deininger et al. (2017) analyse the World Bank's LSMS data for six countries to find that land rental markets might offer an opportunity to enhance land productivity, while offering opportunities for landless people to access land for agricultural production. The findings also show that younger household heads are more likely to rent land, though the average ages of household heads renting land are in the range from 40 years in Malawi to 49 years in Nigeria. This emphasizes that youth aged 15-24 years are highly unlikely to access land through rental markets as well. Therefore, specific programmes designed to enable rural youth to access land for agricultural production may be the only way rural youth can access land. However, there is limited evidence on whether such programmes would work.

Chamberlin and Ricker-Gilbert (2016) study the cases of Zambia and Malawi using a panel dataset and find that renting land leads to productivity increases as well as increases in welfare outcomes for those renting. However, outcomes for those renting out land appear mixed, with negative returns to households renting out land in Malawi and negligible returns to Zambian households renting out land. This suggests that, while promoting the expansion of land rental markets is likely to generate productivity increases in rural Africa, it may not necessarily take place. Moreover, those renting out land are highly unlikely to consider renting it to youth.

Access to finance for investment is another area where youth are disadvantaged. Usually, access to a bank account is associated with better chances of accessing loans, since financial institutions are more likely to lend to individuals with a known financial history. Thus, as a proxy for accessing financial institutions we use data from the Global Findex database on financial inclusion to analyse the proportion of individuals with bank accounts by age and by region (figure 8). Results show that youth (aged 15-24) in SSA generally have less access to bank accounts than their peers in other regions of the world. This geographical pattern holds for the older segments of the population, implying that low use of bank accounts is a generic phenomenon in Africa.

Figure 8. Percentages of individuals with accounts in financial institutions, by age (14-25 and 25 plus), 2011-2017



Source: Authors using Global Findex database (2018).

In recent years mobile banking has been touted as an excellent substitute for holding a bank account with a financial institution. However, statistics show that in sub-Saharan Africa only 54 per cent of men (and 43 per cent of women) without a bank account have a mobile phone (Demirgüç-Kunt et al., 2018). This implies that a large proportion of the unbanked still do not access banking through mobile phones. This may be linked to the issue of limited access to ICT services among rural households compared with their urban counterparts. While mobile banking appears to be on the rise in Africa, much of it is occurring in urban areas and among urban youth.

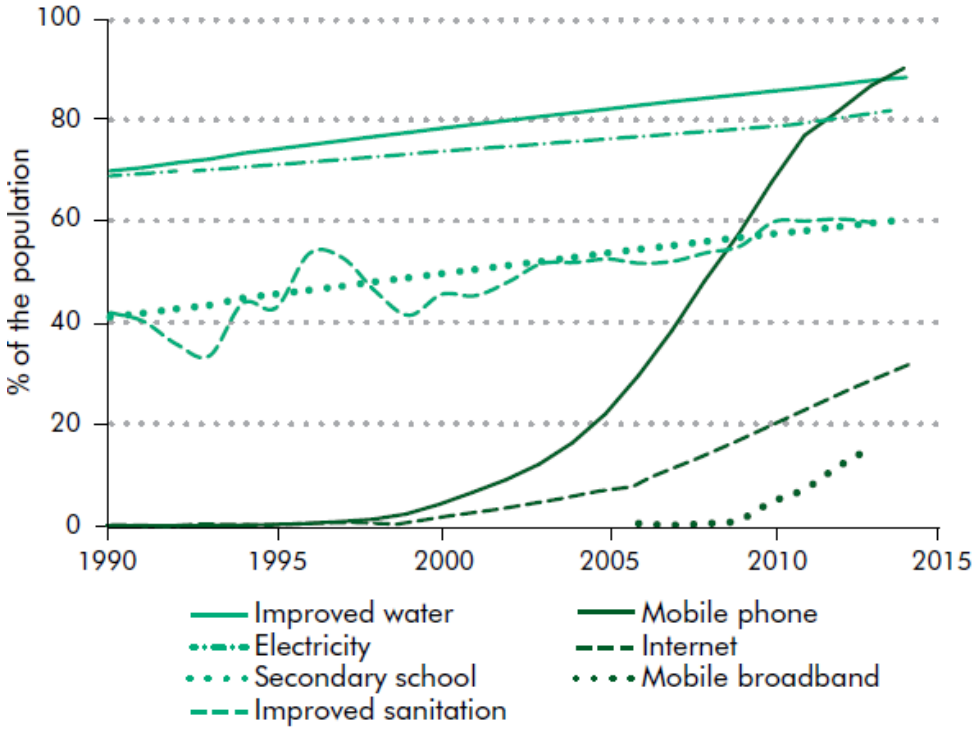
Ability of rural youth to leverage ICT

While ICT is touted as opening up new avenues of opportunity for rural youth in Africa (S4YE, 2018), the evidence mostly points to the importance of mobile phones. Aker and Mbiti (2010) give a comprehensive exposition of the channels through which mobile phones could lead to economic development in Africa, and they highlight the potential economic benefits in the form of reduced communication costs, improved market access and information, increased access to agricultural extension services and potentially

improved job market outcomes (employment and earnings). Aker (2010) finds that the introduction of mobile phone services in Niger explained a 10-16 per cent reduction in grain price dispersion, especially between markets with higher transportation costs. This implies that farmers benefited from the use of mobile phones by being able to access price information and better prices for their grains. In a separate paper, Aker (2011) highlights the role ICT can play in improving agricultural extension service provision in rural Africa, especially in terms of reducing information search costs for the farmer, and information delivery costs for extension service providers. While all these channels are quite plausible, there appears to be limited empirical evidence on the actual impacts of the mobile phone on economic outcomes – let alone impacts that are specific to rural youth in Africa.

Nonetheless, the mobile phone remains one of the most ubiquitous connectivity factors in rural Africa. **Figure 9** shows the level of mobile phone penetration in Africa relative to other technologies and public services, which we have classified as factors of connectivity in our conceptual framework.

Figure 9. Mobile phone adoption relative to adoption of other connectivity services

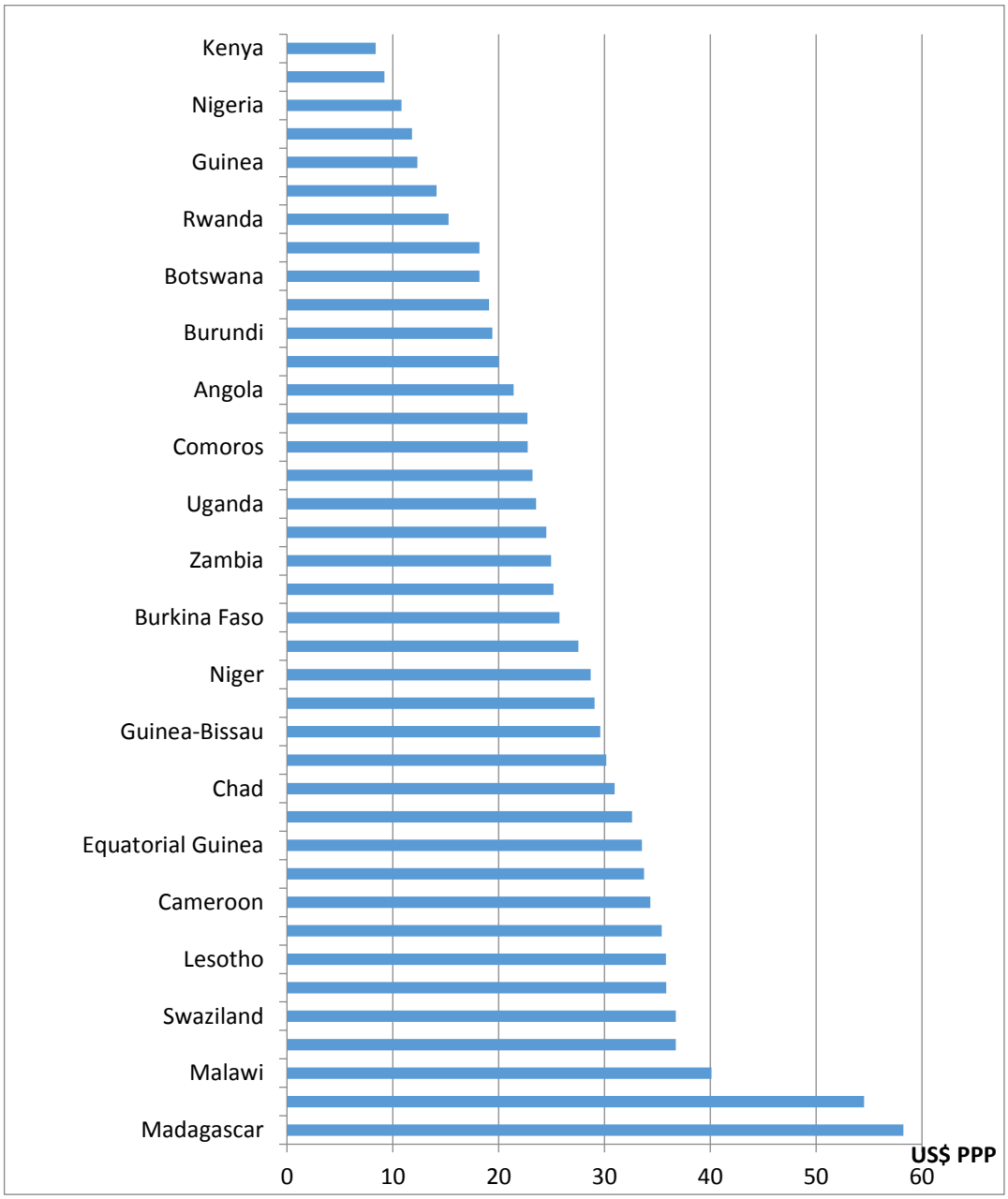


Source: World Bank (2016).

The figure illustrates how rapidly Africa has adopted mobile phone technology. This ubiqu ity of mobile phones is often assumed to imply increased use and access to a variety of resources that can be leveraged for improved economic outcomes for African youth. However, we use complementary data to show that this is not necessarily the case.

In Figure **10** we present estimated average costs of operating a mobile phone in different African countries and show that the cost is relatively prohibitive, ranging from just under US$10 at purchasing power parity (PPP) per month in Kenya to almost US$60 PPP in Cape Verde and Madagascar.

Figure 10. Estimated monthly cost of operating a mobile phone in selected African countries (US$ PPP)

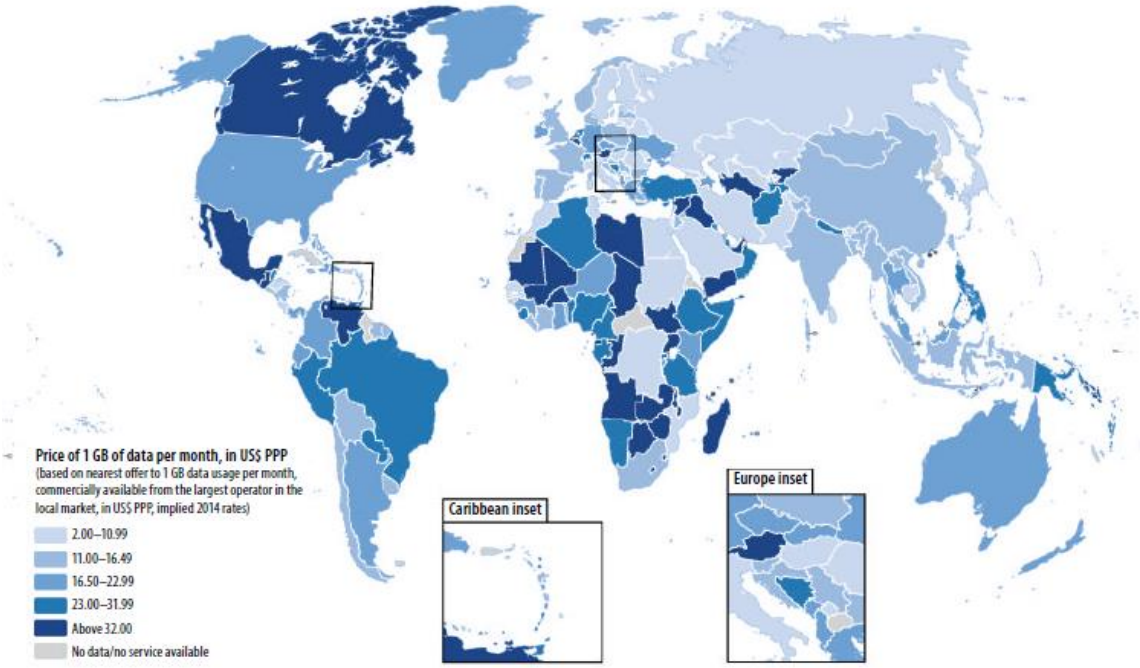


Source: Authors' representation using International Telecommunications Union (2017).

For most countries, the cost per month is above US$20 PPP, which is more than in some developed countries (see figure A.6 in the appendix, which draws a comparison between African and non-African countries to emphasize how the cost of mobile phone services in Africa remains relatively high). These estimates of more than US$20 PPP per month suggest that the cost of operating a mobile phone in Africa is likely to be so prohibitive that rural youth in Africa may not necessarily enjoy better connectivity, especially given that most of them earn less than US$20 per month. In addition, it is important to point out that, in many places in rural Africa, electricity supply is erratic and makes it more difficult for rural youth

keep their mobile phones charged and functional. This also reduces the probability that they are connected and are able to leverage these technologies for improved economic opportunities. Figure 11 is an excerpt from the World Development Report 2016 (World Bank, 2016). It shows that the cost of data (price per gigabyte per month) is similarly prohibitive in much of Africa, exceeding US$20 PPP in most countries.

Figure 11. Price of mobile and fixed broadband services, price per gigabyte a month (US$ PPP), 2015



Source: Reproduced from World Bank (2016).

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Using the most recent data available from the International Telecommunications Union (ITU) we compute the average mobile phone prices and mobile broadband prices for 500 MB of data for 2016/2017. These statistics are shown in Table 8 and Table 9, revealing that both mobile phone use and access to mobile broadband data are at least three times more expensive in Africa than in the rest of the world.

Table 8. Mobile cellular prices as a percentage of GNI per capita (2016, using Atlas method)

Region	Number of countries	Mean	Standard Deviation	Minimum	Maximum
East Africa	12	10.28	12.94	0.60	44.90
West Africa	15	19.00	12.92	1.80	51.10
Central Africa	8	19.16	14.59	2.20	41.70
North Africa	6	4.37	6.00	0.80	16.30
Southern Africa	10	7.46	8.45	0.80	26.40
Africa (total)	51	12.99	12.79	0.60	51.10
Non-African	138	3.02	7.99	0.10	90.20
World	189	5.71	10.48	0.10	90.20

Source: Authors' calculations using ITU (2017).

Table 9. Mobile broadband prices for 500 megabytes of data, as a percentage of GNI per capita (2016, using Atlas method)

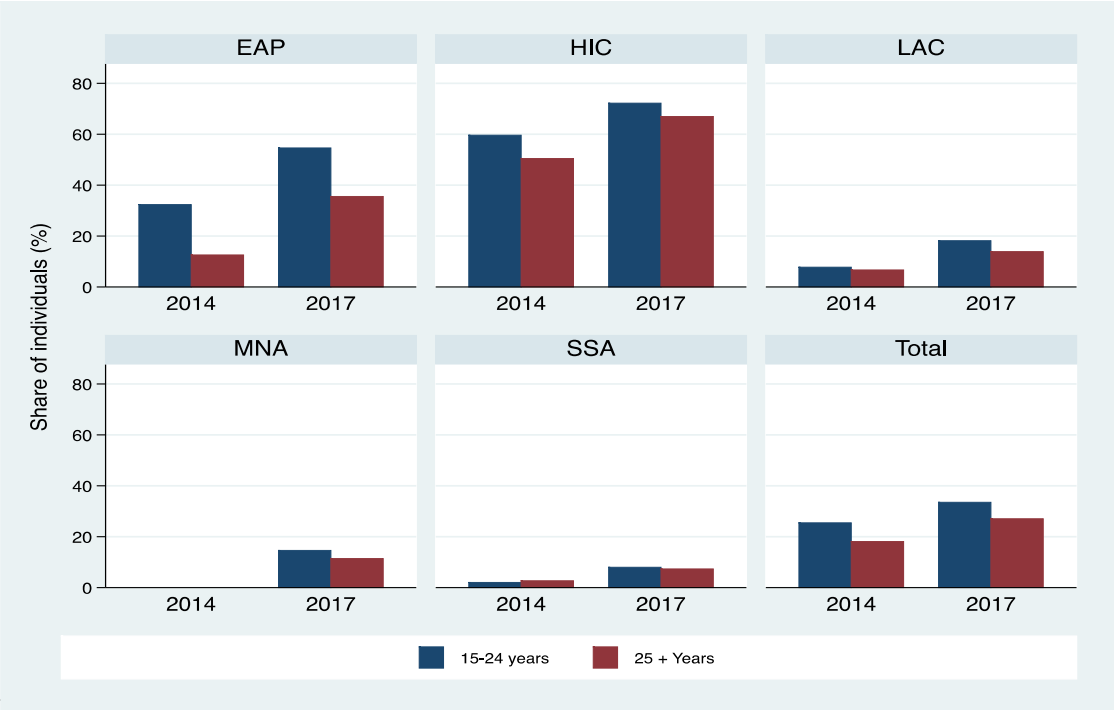
Region	Number of countries	Mean	Standard Deviation	Minimum	Maximum
East Africa	13	17.15	34.24	0.70	129.50
West Africa	15	16.18	24.61	1.30	102.90
Central Africa	7	13.44	15.17	2.10	43.90
North Africa	6	6.23	11.27	0.70	29.20
Southern Africa	10	7.84	8.03	1.30	27.90
Africa (total)	51	13.25	22.83	0.70	129.50
Non-African	135	4.20	27.50	0.10	320.30
World	186	6.68	26.55	0.10	320.30

Source: Authors' calculations using ITU (2017).

Thus, we attest to the high cost of ICT and contend that investments and interventions designed to bring down the cost of operating a mobile phone and accessing data in rural Africa will need to be considered if real ICT connectivity is to be achieved for rural youth.

Turning to evidence on the use of ICT among youth, we present data from the Global Financial Inclusion Databases in **Figure 12**. The data show use of the internet to pay bills or buy products and services online, by age category. We find that youth are more likely to use the internet in other parts of the world, especially in high-income countries and in EAP, but are not significantly more likely to use the internet in SSA. Perhaps more important to note from the illustration is the finding that use of internet to pay bills or purchase products and services is lowest in SSA. While there was an increase between 2014 and 2017, this is still less than 15 per cent of the population using the internet in this manner. It is also more likely that the bulk of this observed increase emanates from urban areas, which tend to have better internet and telecommunications connectivity in general. These data imply that rural youth in Africa are really not using the internet very much, especially for commercial transactions.

Figure 12. Individuals who used the internet to pay bills or buy online, by age (14-25 and 25+), 2011-2017



*

HIC, high-income countries.

Source: Authors' representation using Global Findex Database (2017).

A separate consideration is that the use of mobile phones and the internet can be divided into entertainment and productive categories, and anecdotal evidence from urban South Africa suggests that, in the majority of cases, youth use mobile phones for entertainment purposes (Donner et al., 2011). Thus, while additional research is needed to better understand the use of mobile phones and the internet among rural youth in Africa, the initial descriptive statistics suggest that African rural youth are not currently using ICT much, and probably not for the purposes of enhancing their economic opportunities.

Overall, these findings dispel the notion that rural youth are in a position to leverage ICT for commercial transactions and improved economic opportunities. While future growth in the use of ICT in SSA is indeed expected, the advantages of the technology will not be realized automatically. Interventions to increase access to ICT among rural youth as well as to enhance their skills in using ICT for expanding their opportunities and taking advantage of available opportunities will be necessary if the digital dividend is to be coupled with the demographic dividend in rural Africa.

Innovation

The narrative on rural youth in Africa also suggests that they are highly innovative and tend to be creative. Evidence from around the world shows that many inventions have indeed originated from young people (World Intellectual Property Organization, 2017). Despite having access to the World Intellectual Property Organization data on inventions, we find large data gaps for Africa that prevent us from conducting any meaningful analysis, let alone disaggregated analysis by age of patent applicant. The literature on youth and innovation is scanty and often provides qualitative assessments of innovations among youth. For example, Baskaran and Mehta (2016) look into youth perspectives in resource-constrained settings to gain a qualitative understanding of innovation. Their study reveals that the definition of innovation can be quite context-specific, making it difficult to draw comparisons across countries, even neighbouring African countries such as Kenya and Tanzania, which were included in the study. This points to the need for

rigorous research that looks into innovation among rural youth to obtain a better understanding of how innovative rural youth might be and to what extent this can be leveraged when designing investments and interventions for rural youth in Africa.

5.2 Inclusive rural transformation and changing opportunity space

Gender disparities in human capital formation

For rural transformation to be inclusive, Africa will need to address a multitude of persistent disparities. One such disparity is based on gender. Young women in rural areas are structurally disadvantaged on many fronts, yet they constitute about half if not more of the youth in most African countries.

Young women enter motherhood and marriage early in Africa and this has negative implications for their opportunity space, particularly their prospects of decent employment. Using the DHS programme data, Cáceres-Delpiano (2012) shows that fertility has a negative impact on employment for women in developing countries, especially for those in rural areas and those with more children. Table 10 and table 11 are excerpts from Cáceres-Delpiano (2012), showing that, for the 26 African countries analysed, having four or more children significantly reduces the labour participation of women. This is actually more pronounced for women with more education, implying that, though education would have given these women a chance to improve their employment outcomes, they fail to realize the benefits of their education. Further analysis also presented in the same study reveals that the negative impact of fertility on women's labour participation is accentuated in informal jobs, which unfortunately comprise the major labour participation option for most rural women. While a slightly different point, this emphasizes the challenges associated with a preponderance of informality in African labour markets. Informal labour markets are less likely to be regulated and as a result may have fewer protections for women and, in particular, mothers. In addition, they are unlikely to have mechanisms that facilitate integration of mothers into the active labour force, especially young mothers.

We turn to the same data source used by Cáceres-Delpiano (2012), the DHS (in its updated form), to assess trends in fertility and age at first marriage among women in African countries. We find that there were marginal improvements on these indicators between the 1990s and the mid-2010s (Figure 13 and Figure 14).

The total fertility rates presented in Figure 13 are quite alarming, showing that in rural areas most women have more than four children, which coincidentally is the threshold number of children found by Cáceres-Delpiano (2012) to significantly reduce women's labour participation. While there is a declining trend in most African countries, there are countries where the trend is actually increasing (in eight countries analysed).

Similarly alarming trends are observed for the median age of women at first marriage. This is especially the case for young women in rural areas, where the median age at first marriage is still below 20 years for 26 out of 30 African countries analysed. It is important to emphasize that the statistics presented in Figure 14 show the median age and not the mean at first marriage; this means that half of the young women/girls are married by the time they reach the ages shown.

Table 10. Instrumental Variables estimates of the impact of fertility on selected outcomes of mother's employment: heterogeneity by urban status and education level

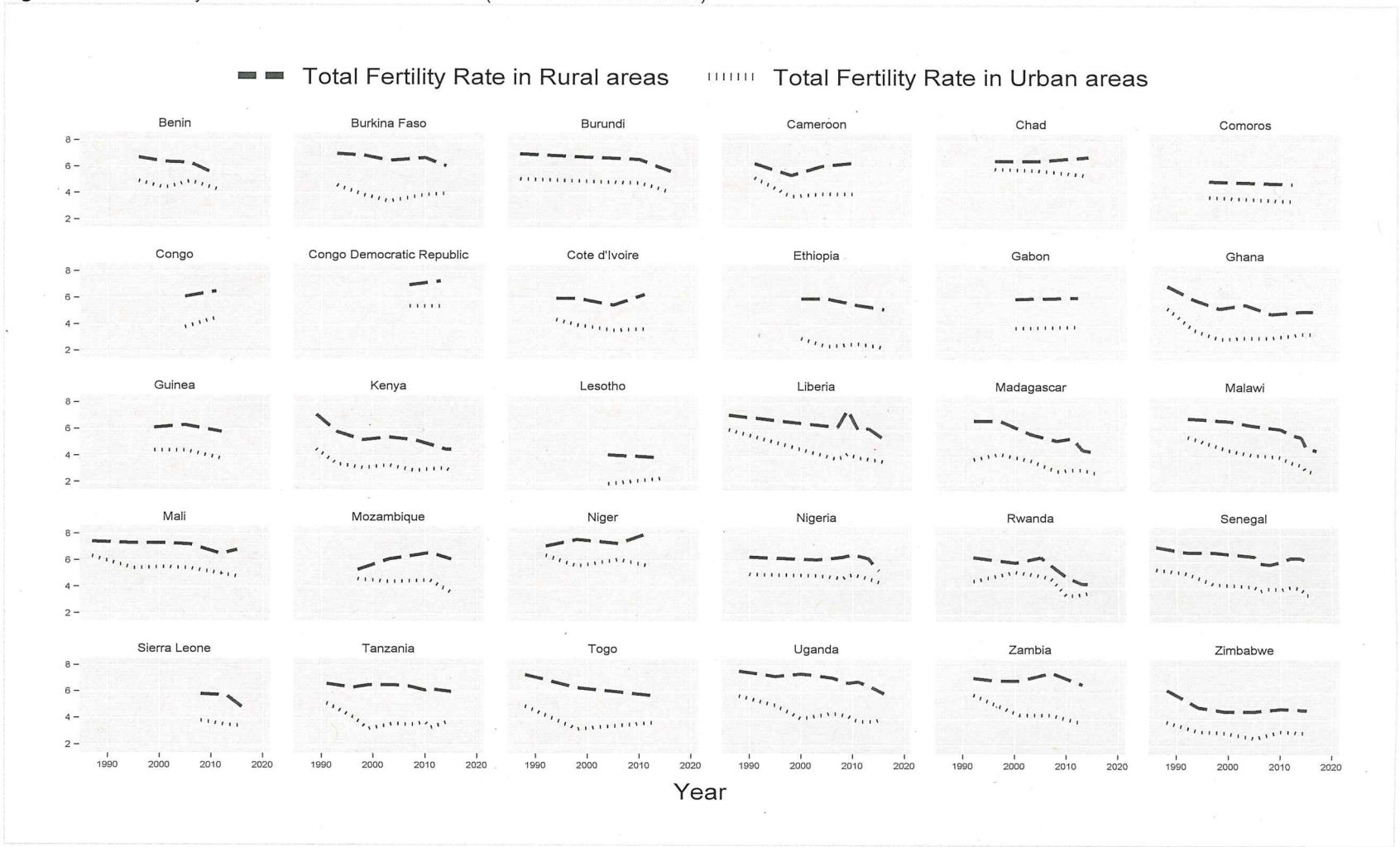
	Worked last year				Last year informal job				Last year formal job			
	1+	**2+**	**3+**	**4+**	**1+**	**2+**	**3+**	**4+**	**1+**	**2+**	**3+**	**4+**
Urban	-0.0561**	-0.0244	-0.0358	-0.0324	-0.0402*	-0.0375†	-0.0501*	-0.0418	-0.0384	0.0141	0.0097	0.0401
	(0.0211)	(0.0209)	(0.0225)	(0.0360)	(0.0203)	(0.0215)	(0.0226)	(0.0354)	(0.0246)	(0.0321)	(0.0262)	(0.0410)
Rural	-0.0137	-0.0159	-0.0076	-0.0409*	-0.0244†	-0.0217	-0.0050	-0.0462**	0.0282	-0.0073	-0.0107	0.0261
	(0.0151)	(0.0138)	(0.0143)	(0.0168)	(0.0148)	(0.0136)	(0.0143)	(0.0168)	(0.0206)	(0.0150)	(0.0149)	(0.0237)
Mother: zero years of education	-0.0198	-0.0272	-0.0045	-0.0457*	-0.0312	-0.0277	-0.0036	-0.0488*	0.0171	-0.0173	-0.0215	0.022
	(0.0208)	(0.0183)	(0.0175)	(0.0189)	(0.0204)	(0.0184)	(0.0179)	(0.0191)	(0.0263)	(0.0185)	(0.0171)	(0.0228)
Mother: > zero years of education	-0.0315*	-0.0150	-0.0290†	-0.0351	-0.0261†	-0.0270†	-0.0354*	-0.0432†	-0.0025	0.0094	0.0107	0.0301
	(0.0151)	(0.0150)	(0.0165)	(0.0253)	(0.0148)	(0.0149)	(0.0164)	(0.0258)	(0.0198)	(0.0217)	(0.0193)	(0.0339)

Table 11. Instrumental Variables estimates of the impact of fertility on selected employment outcomes for women in Africa

	Number of children:			
	1+	**2+**	**3+**	**4+**
First stage	0.8162**	0.8458**	0.9161**	0.9017**
	(0.0414)	(0.0334)	(0.0326)	(0.0359)
Currently working	-0.0058	-0.0114	-0.0263*	-0.0471**
	(0.0152)	(0.0138)	(0.0133)	(0.0170)
Worked last year	-0.0084	-0.0222	-0.0178	-0.0535**
	(0.0148)	(0.0138)	(0.0132)	(0.0175)

Notes: Robust standard errors are in parentheses. The specification is the one presented in Equation. (1) below. Each coefficient reported comes from a different regression. Covariates in the model are dummy variables by country of residence, year, urban/rural status, mother's age, mother's years of education, and mother's literacy status. 1+, 2+, 3+ and 4+ represent the samples of families with one, two, three and four or more children, respectively.
†, $p \leq 0.10$; *, $p \leq 0.05$; **, ≤ 0.01.
Equation 1: $y_{ict}^{s} = \alpha^{s} + \theta_{c}^{s} + \delta_{t}^{s} + \gamma^{s} n_{ict}^{s} + \beta_{c^*}^{s} X_{ict}^{s} + \varepsilon_{ict}^{s}$ where y_{ict}^{s} is a measure of a mother's labor force attachement for mother *i* in country *c* for year *t* for sample *s*; n_{ict}^{s} is family size, X_{ict}^{s} are covariates for the same observation. θ_{c}^{s} and δ_{t}^{s} are country and year fixed effects respectively. $\beta_{c^*}^{s}$ are coefficients of impact for each covariate, which vary across three country regions (c^*): Latin America, Africa and Asia. The main coefficient of interest is the impact of family size on mother's labor force attachment, which is measured by γ^{s}.
Source: Cáceres-Delpiano (2012).

Figure 13. Total fertility rates in select African countries (rural versus urban areas)



Source: Authors' representation using Demographic Health Surveys Program data (1985-2017).

Figure 14. Median age at first marriage for women in select African countries (rural versus urban areas)

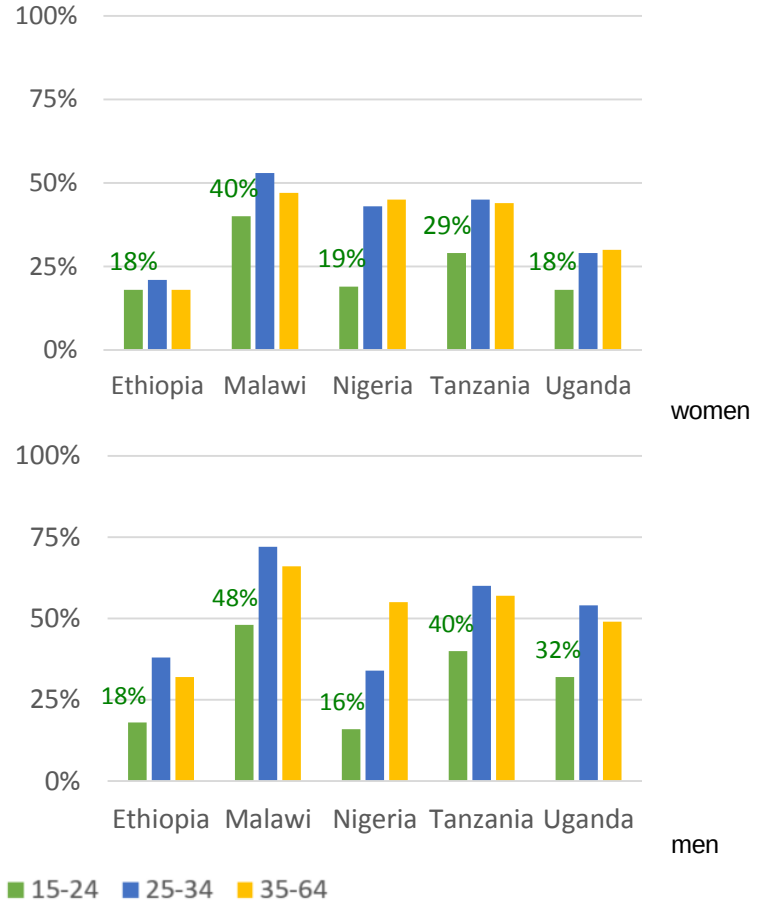
Source: Authors representation using Demographic Health Surveys Program data (1985-2017).

A clear and temporally consistent rural-urban disparity is observed across the African countries for both the total fertility rate and median age at first marriage indicators. This stresses the point that rural young women in Africa are heavily disadvantaged and efforts to enable them to take advantage of economic opportunities will need to be concerted and mainly address issues of human capital formation. This is one area where homogeneity rather than heterogeneity is observed across many African countries.

In a few countries, the DHS also asked about the age when the young women had their first child or were pregnant, and the results reinforce the evidence on the challenge of early parenthood and marriage among women in Africa. Evidence focused on empowerment of women in agriculture further shows that women in general are not empowered and it is probably worse for younger women, who often have less agency (Malapit et al., 2014). Thus, within the agriculture sector, serious efforts are needed to address the challenges faced by young women.

With respect to labour participation, Boserup (1989) presents pieces of evidence from numerous studies showing that, in past decades, women in rural Africa were mostly engaged in domestic work and agriculture. Food preparation and collection of water and firewood (biomass), particularly in the home, were major activities carried out by women, and few women in rural Africa participated in the labour market, even fewer in off-farm labour and entrepreneurial opportunities. The evidence of Boserup (1989) is perhaps outdated, as newer evidence is now coming in, suggesting a transition among rural women. Van den Broeck and Kilic (2018) present new evidence on gender disparities as they pertain to off-farm labour participation in Ethiopia, Malawi, Nigeria, Tanzania and Uganda. They show that off-farm labour participation makes a significant contribution to rural livelihoods, so ensuring gender parity in this area would be important for inclusive rural transformation. However, gender disparities do exist and they are heterogeneous across countries and age cohorts. For the most part, women participate less often in off-farm employment, with the exception of Nigeria, where participation rates are roughly the same. The gender disparities are more pronounced for young adults (aged 25 to 34 years) and older adults (35 years and over). shows estimates taken from Van den Broeck and Kilic (2018). The top panel presents the statistics for women while the bottom panel shows those for men. For the age category 15-24 years, significant disparities are found in Tanzania and Uganda, where young men participate more in off-farm employment. However, in Ethiopia there are no disparities, with 18 per cent of both male and female youth aged 15-24 participating in off-farm employment. Dynamics in off-farm employment for this age category in rural areas also suggest that, in the last few years, more and more rural youth have been participating in off-farm employment, including young women.

Figure 15. Off-farm labour participation among rural men and women, by age category, 2016



Source: Van den Broeck and Kilic (2018).

Participation in policy processes and civic engagement

As alluded to earlier, the prevailing narrative on rural youth in Africa postulates that youth are currently not adequately participating in policy processes and are not as civically engaged as they ought to be. Further, the narrative posits that, if they were more engaged in policy processes, their concerns would be heard and as a result policy reforms and public investments would be made to address their concerns. The evidence on participation in policy processes is scanty. Nonetheless, using the Afrobarometer surveys data we find that African youth indeed participate less actively than adults in local policy processes and national politics (Afrobarometer, 2017, 2017). Table 12 shows that, in most African countries, rural youth participate less than rural adults, in terms of contacting their local government councillors to express their views and concerns. The table also shows that rural youth actually participate more than their urban counterparts. Similar results are found in the case of rural adults, who also contact their local councillors more than urban adults.

Table 12. Proportions of youth and young adults that contacted their local government councillors, by residence

	Adults (> 24 years old)		Youth (18-24 years old)	
Country	Urban	Rural	Urban	Rural
Algeria	0.23	0.32	0.14	0.25
Benin	0.23	0.35	0.13	0.10
Botswana	0.28	0.35	0.08	0.14
Burkina Faso	0.13	0.35	0.15	0.11
Burundi	0.09	0.17	0.08	0.14
Cameroon	0.23	0.30	0.17	0.22
Cape Verde	0.21	0.17	0.14	0.11
Côte d'Ivoire	0.17	0.10	0.05	0.08
Egypt	0.17	0.29	0.18	0.18
Eswatini	0.13	0.13	0.04	0.05
Gabon	0.14	0.22	0.07	0.08
Ghana	0.23	0.37	0.11	0.22
Guinea	0.21	0.21	0.06	0.09
Kenya	0.19	0.29	0.14	0.13
Lesotho	0.33	0.49	0.07	0.21
Liberia	0.40	0.55	0.34	0.47
Madagascar	0.20	0.29	0.03	0.16
Mali	0.15	0.22	0.06	0.08
Mauritius	0.15	0.19	0.10	0.07
Morocco	0.33	0.36	0.23	0.27
Mozambique	0.09	0.09	0.07	0.11
Namibia	0.27	0.21	0.05	0.05
Niger	0.19	0.25	0.11	0.14
Nigeria	0.19	0.23	0.13	0.17
Sao Tome and Principe	0.22	0.31	0.18	0.22
Senegal	0.23	0.22	0.11	0.07
Sierra Leone	0.34	0.36	0.23	0.23
South Africa	0.28	0.44	0.21	0.31
Sudan	0.11	0.16	0.09	0.10
Tanzania	0.31	0.35	0.13	0.16
Togo	0.05	0.10	0.01	0.07
Tunisia	0.12	0.16	0.05	0.12
Uganda	0.28	0.23	0.13	0.10
Zambia	0.23	0.39	0.10	0.27
Zimbabwe	0.24	0.43	0.13	0.17

Source: Authors' calculations using Afrobarometer (2016) data.

Results on other indicators of participation in policy processes are mixed, revealing heterogeneity across the African countries analysed. Overall, the levels of participation in policy processes are generally low throughout Africa (less than 40 per cent in most countries), whether one considers countries that have experienced some level of structural and rural transformation or those that are yet to transform their economies. This raises the question: to what extent does participation in policy processes really matter for economic transformation and particularly with respect to opportunities for rural youth? The higher levels of participation found among rural than urban residents (both youth and adults) would seem to suggest that participation in policy processes, while inherently important, does not necessarily translate to significant changes for most rural residents in Africa.

Safety nets: cash transfers and employment guarantee schemes

Although the narrative on rural youth rarely makes mention of social protection or safety nets, our conceptual framework does. In part this emanates from the vast evidence showing the effectiveness of social protection in fostering rural household resilience and protecting assets from stress depletion, which are all likely to affect rural youth opportunities and outcomes.

One aspect of social protection that is perhaps more youth-specific and has been highlighted in the literature is the role of conditional cash transfer programmes in promoting schooling and health among young people, especially those from poorer households. Cash transfer programmes and public works interventions are a seasoned approach to inclusive rural transformation, especially in terms of generating temporary employment among the poor and food-insecure in rural areas. In the case of the Productive Safety Net Programme in Ethiopia there is evidence showing that cash transfers tied to provision of labour in community-level public works were able to temporarily address rural unemployment, though with limited impacts on income and asset indicators (Berhane et al., 2014; McCord and Slater, 2015). Nonetheless, the approach leveraged investments in essential rural infrastructure to achieve multiple objectives.

In the case of the Vision 2020 Umurenge rural community public works programme in Rwanda, the poorest of the poor were targeted for employment, temporarily generating employment (Gahamanyi and Kettlewell, 2015; Gatzinsi et al., 2019). However, implementation challenges led to limited impacts on gender empowerment (FAO, 2016). It is therefore likely that public works programmes, at least in their current designs, are not particularly well suited to directly address issues of unemployment among the disadvantaged poor or women. Additional research may be needed to better understand implications of such safety net programmes on rural youth opportunities and outcomes.

In the cases of the acclaimed *Programa de Educación, Salud y Alimentación* and *Bolsa Familia* programmes in Mexico and Brazil, respectively, cash transfer programmes were effectively leveraged to enhance human capital investments, particularly to improve health outcomes, ensure school attendance and increase educational outcomes. Similar programmes could be envisaged for ensuring continued education among rural Africans, especially young girls, who tend to drop out of school earlier than boys. The role of safety net programmes in fostering learning as opposed to just school enrolment and attendance is also an area to explore (World Bank, 2018b).

More extensive evidence on the role of safety net programmes in addressing unemployment is perhaps drawn from assessments of older public works programmes in Asia (Subbarao, 2003). Notable examples of programmes specifically addressing unemployment in rural areas include the Maharashtra Employment Guarantee Scheme (Dutta et al., 2012; Dev, 1996; Ravallion et al., 1993) and the more recent Mahatma Gandhi National Rural Employment Guarantee Scheme in India (Lui and Barrett, 2012). The evidence from

India suggests that, while innovative mechanisms can be used to make public works programmes more effective at generating temporary employment in rural areas, particularly for the poorest of the poor, they are often fraught with administrative and targeting challenges. It is unclear to what extent these programmes can guarantee employment for youth in rural areas (Dutta et al., 2012; Liu and Barrett, 2012). Overall, the evidence on impacts of safety nets and employment guarantee schemes is varied, showing reasonable impacts on fostering human capital formation and addressing issues of food security and nutrition (Hidrobo et al., 2018) but limited impacts on creating employment.

Disability and rural youth

A topic area found to be missing from most of the narrative on rural youth in Africa is disability. Searching the literature on the topic also reveals a research gap. A few exceptions include Cramm et al. (2013, 2014), Parnes et al. (2009) and Groce (2004). However, these studies are mostly descriptive in nature or reviews of issues concerning youth disabilities, and none are rigorous impact evaluations. Using a small sample of 120 disabled youth and 117 peers, Cramm et al. (2014) study the implications of being disabled youth in South Africa. They find that the proportion of disabled youth that is unemployed is higher than that of other youth by about 10 percentage points. In addition, the proportion of disabled youth with education at various levels is about 9 percentage points lower. In a related study, Cramm et al. (2013) analyse a sample of 523 disabled "youth" (aged 18-35) and 466 non-disabled peers from five provinces in South Africa. They also find a significantly higher unemployment rate among the disabled, implying that persons with disabilities face more barriers to employment than non-disabled persons.

Groce (2004) discusses the issues concerning disabled adolescents and youth, and presents some descriptive statistics from the United Nations disability statistics compendium. What emerges is that the data are not comparable across countries because of differences in definitions as well as methodology. Moreover, the data from the United Nations are mostly from the 1990s. Similarly, Parnes et al. (2009) examine the general literature on disability and development and identify key issues that need to be investigated further or addressed by policymakers. Thus, while it is often mentioned that rural youth with disabilities have fewer opportunities and lower economic outcomes, there appears to be limited data or evidence on the topic.

Conflict and fragility: implications for rural youth

Prior to the new millennium Africa was fraught with issues of armed conflict and political violence. As a result, many African countries offered limited economic opportunities for their young people. The scene has since changed, albeit with a few countries still experiencing conflict. Data from the Armed Conflict Location and Event Data Project ACLED (2018) show that the levels of armed conflict have substantially declined in much of Africa.

It is now more important to address issues of conflict pockets or hotspots, which tend to be spread across the borders of different African countries but are located in specific regions or pockets of fragility. shows a list of some of these conflict hotspots and estimated mortalities between 2011 and 2017. It is worth noting that a majority of these conflicts are somewhat protracted in duration, implying that young people who live through such conflicts are indelibly affected during a long period of their formative years. As a result, they will often face challenges in gaining a decent education or learning skills that will foster their socio-economic prospects.

Table 13. Conflict hotspots in Africa

Country and region	Major cause of conflict	Estimated number of deaths from political violence (2011-2017)
Nigeria	Boko Haram	41,129
Niger (Lake Chad basin)	Boko Haram	1,616
Chad (Lake Chad basin)	Boko Haram	811
Cameroon (Lake Chad basin)	Boko Haram	3,762
Mali	National Movement for the Liberation of Azawad (MNLA)	3,475
Democratic Republic of the Congo (eastern DRC – Kivu)	Tribal land disputes	11,012
Somalia	Al Shabab	27,135
South Sudan	Civil war	22,854
Sudan	Civil war, Janjaweed militia	24,627
Central African Republic	Civil war, Séléka Alliance, rebel groups	8,733
Kenya	Al Shabab	3,236
Ethiopia	Al Shabab, internal conflict (Oromia), conflict with Eritrea	6,308
Uganda (Northern Uganda)	Lord's Resistance Army	572

Source: Authors' compilation using ACLED data (2018).

The evidence also shows that several African countries have experienced or are currently experiencing post-conflict conditions, which imply an opportunity to rebuild infrastructure and fill in market vacuums for various products and services. The post-conflict conditions have their own implications for youth in general and more so for rural youth in Africa. One issue highlighted is that, during the periods of conflict, youth often do not have the opportunity to learn and gain skills and experience that are often needed during post-conflict periods. Given this, the opportunities that arise in post-conflict situations are often capitalized on by those who fled the conflict or foreigners who are able to take advantage of the emerging opportunities.

Recent policy debate concerning investments in conflict or refugee situations has advocated investing in industrial zones or providing technical training opportunities where youth may have experienced forced migration (Betts et al., 2017). The evidence, unfortunately, is rather scanty on the impacts of these types of investments and how they affect rural youth. Maystadt et al. (forthcoming) highlight the need to leverage labour market opportunities and goods and services markets (trade) in addition to providing productive assets to those living in refugee situations, including youth. These market-based approaches together with policies that allow refugees mobility and access to productive resources have been found to have a positive impact on both the refugees and the host communities (Taylor et al., 2016).

The sets of challenges faced by youth in countries still in conflict are quite different. Berckmoes and White (2014) study the challenges of uncertainty and lack of opportunities for rural youth during periods of conflict in rural Burundi. Peters (2011) looks into the case of war in Sierra Leone and shows that youth are largely disadvantaged primarily because they often have to take up parental roles and fend for themselves as well as relatives much earlier in their lives. This puts a constraint on their ability to engage in opportunities that would

otherwise enable them to realize better returns in the long run. Thus, rather than the common discourse on how conflict results from disgruntled youth with no jobs, the evidence points to youth affected by past and present conflict in ways that prevent them from engaging in activities that would benefit them.

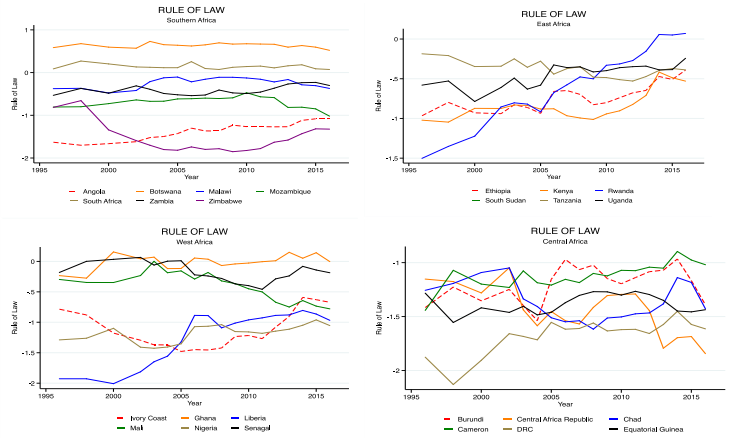
5.3 Institutional constraints to transformation for rural youth

Governance

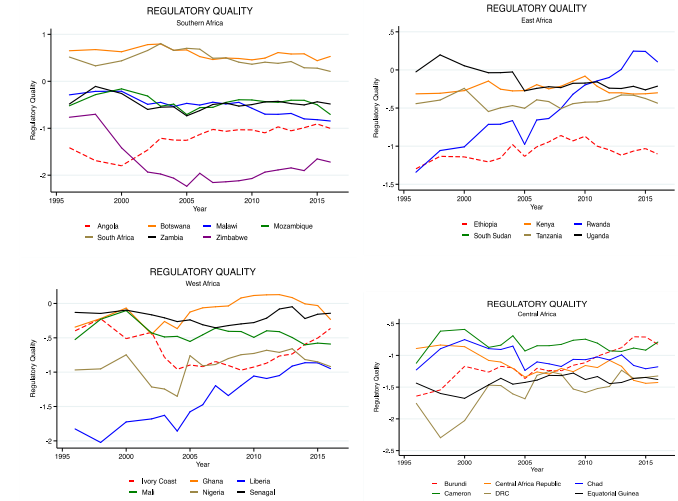
Africa's institutions play an important role with regard to creating an enabling environment for youth to effectively participate in the African economy. In this section, we explore the dynamics of governance and institutions in Africa and how they might shape opportunities for rural youth. Using the Worldwide Governance Indicators (WGI), we analyse trends in governance in Africa by subregion and by country, and note improvements and stability in some countries, but also a great degree of heterogeneity across countries and subregions. Figure 16 presents the results for selected indicators.

Figure 16. Selected WGI indicators by country (subregions)

(a) Rule of law



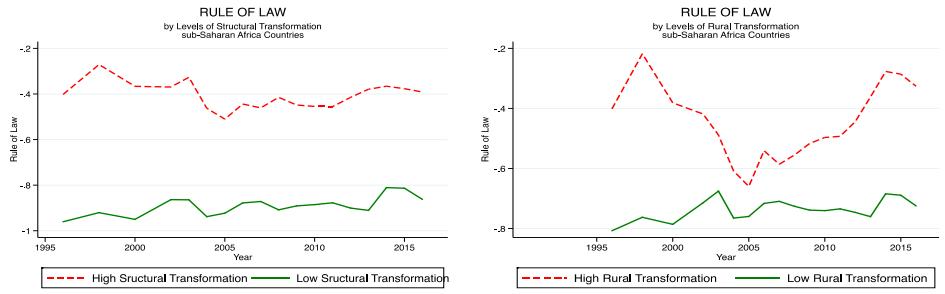
(b) Regulatory quality



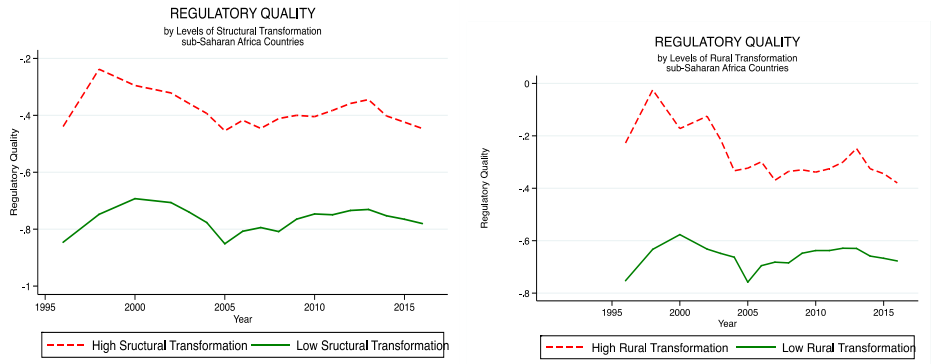
The improvements are likely to be positively correlated with opportunities for rural youth manifested in the levels of structural and rural transformation, and of inclusiveness, that countries achieve. Figure 17 confirms that the levels of a selected range of governance indicators are relatively better in countries that achieved relatively higher levels of structural transformation or rural transformation.

Figure 17. Selected WGI indicators by levels of structural transformation and rural transformation

(a) Rule of law



(b) Regulatory quality



While the measures on governance can be associated with the levels of rural and structural transformation, it is not as straightforward to link governance with youth-specific outcomes. It is likely that good governance is simply a prerequisite for good development which would benefit all people in any given country in Africa, including rural youth.

Business climate

The Enabling the Business of Agriculture (EBA) indicators are perhaps more useful in assessing the institutional set-up that rural youth are more likely to operate under (World Bank, 2017). Given the evidence that shows rural youth engaging in agriculture and the agrifood system in general, it would stand to reason that the quality of regulations and institutions governing the business of agriculture would have a bearing on the opportunities of rural youth.

The EBA indicators measure legal aspects and the efficiency of certain related processes, and score regulations related to seed, fertilizer, machinery, finance, markets, transport, IT and water. While scores in the EBA 2017 Report (World Bank, 2017) indicate that there is a correlation between legal and efficiency indicators, meaning that countries with stronger regulations also tend to have more efficient regulatory processes in place, an assessment of the EBA indicators for the Alliance for a Green Revolution in Africa (AGRA) 2018 Africa Agriculture Status Report (AGRA, 2018) has highlighted that an analysis of the relationship between the strength of regulatory frameworks and realized agribusiness outcomes in African

countries indicates that policymakers should use EBA scores alongside other evidence and considerations for a more comprehensive analysis, given that there can be major confounding factors such as informal institutions and political will that affect implementation and impact of a regulatory framework (AGRA, 2018).

Strengthening the inclusion of women and youth in rural development calls for strong institutions capable of influencing youth capabilities and the opportunity space. Most of the institutional capabilities and recommended actions are quite general and required for good rural development (and fall within the key areas monitored by the EBA).

One consideration is to acknowledge that countries are at different stages of structural and rural transformation and that there is heterogeneity among youth with respect to skills, preferences and the particular opportunity sets they find in their respective countries. Therefore, it is useful to distinguish between those who choose to stay on farm and those who decide to leave. For those who choose agriculture as their main livelihood, efforts are needed to improve their prospects of success by enhancing access to technology, including productivity-enhancing inputs such as seeds and fertilizers, and strengthening input delivery systems. At the same time, policies and institutions that improve access to output markets, finance, information and infrastructure are critical, as is avoiding policies that create barriers to access for youth.

For those who exit farming, policies and programmes must be set to help build skills that enhance their employability and entrepreneurial capacity. This may include targeted improvement of key technological skills, vocational training for jobs in the non-agricultural sectors, and basic non-cognitive skills development that may enhance their chances of success in work environments outside agriculture.

Informality of markets

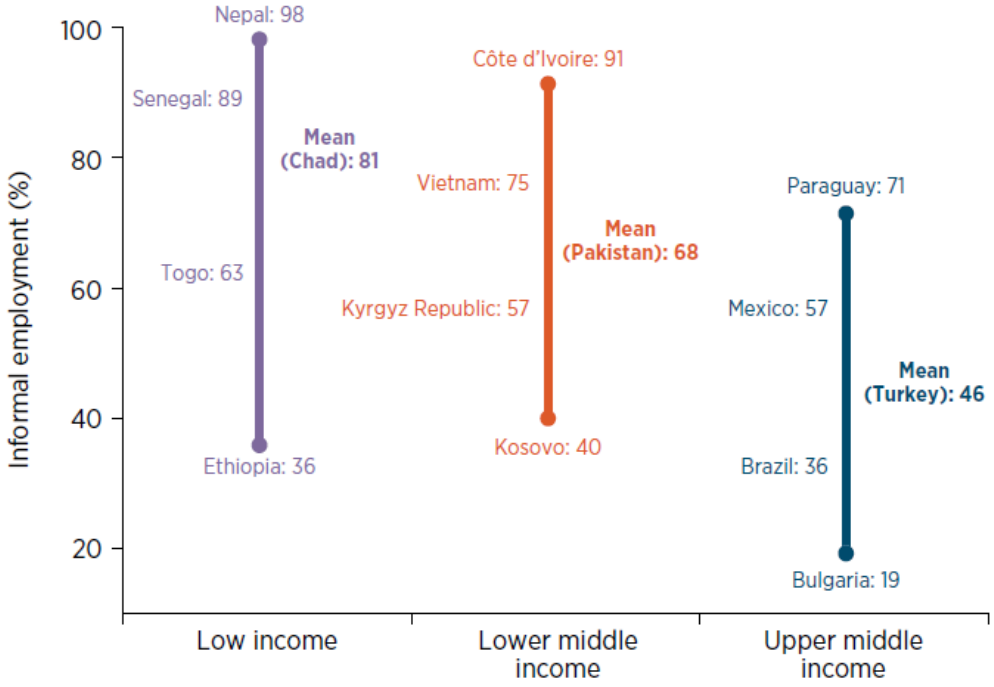
One of the issues that the narrative on rural youth does not explicitly address is informality of markets (including labour markets) and how rural youth in Africa are actively participating in these markets. In some respects, informality of markets can be judged to be an institutional limitation, which is part of the development and transformation process. Nations that are more developed and have transformed economies tend to have market institutions that are more formalized and codified (Acemoglu and Johnson, 2005). Often, deliberate interventions are necessary to aid formalization and codification processes, though this may occur endogenously when the benefits of formalization outweigh the benefits of the status quo of informality (Sutter et al., 2017). The reasons why informality is a concern, vis-à-vis prospects of rural youth in Africa, is that it is often characterized by low productivity and low wages, in addition to having limited protections for those who participate in them. Informal markets are also more likely to produce substandard products and services, which may make countries with higher informality less competitive globally (World Bank, 2019).

Estimates released in the World Bank's World Development Report 2019 show that "in Sub-Saharan Africa, informality remained, on average, at around 75% of total employment from 2000 to 2016" (World Bank, 2019, p. 8). This is compared with 60 per cent in South Asia, which represents an increase from about 50 per cent in the 2000s, and more than 50 per cent in Latin America. The fact that informality increased in South Asia, yet incomes continued to grow, suggests that informality may not decline as incomes grow in the developing world.

Figure 18 is an excerpt from the World Development Report 2019, showing that, while informality of employment does decline on average as income increases, there remains a large variance within each income category. This emphasizes that markets will not necessarily formalize as economies transform and transition to higher incomes. Moreover, even in some countries where deliberate efforts have been made to

formalize the markets, this has not led to a reduction in informality (e.g. in Peru deliberate efforts have been made to formalize the economy, yet informality has stubbornly remained at about 75 per cent over three decades).

Figure 18. Informal employment, by income group and country



Source: Reproduced from World Bank (2019). This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution 3.0 IGO (CC BY 3.0 IGO) licence, which permits others to distribute, remix, transform and build upon this work, for any purpose, even commercially, provided the original work is properly cited. See: https://creativecommons.org/licenses/by/3.0/igo/.

Overall, innovations will be needed to address the informality of markets in Africa to ensure that they deliver better opportunities and outcomes for rural youth. More research is needed to better understand the workings of informal markets and the implications they have for rural youth.

6. Conclusions: key investments and policy recommendations

In this background paper we have highlighted the prevailing narrative on rural youth in Africa and the prospects for African youth to participate and benefit from opportunities in the African economy. In the process, we developed a stylized conceptual framework and reviewed the evidence in the literature, in addition to conducting our own analysis of several datasets, to question the validity of the narrative on rural youth in Africa. Our assessment finds several inconsistencies between the prevailing narrative and the available evidence on youth. We also find research gaps that limit our ability to assess the narrative, perhaps explaining why some policy and investment decisions concerning rural youth have been based on assumptions and conjecture. Nonetheless, ample evidence exists that we have reviewed, allowing us to make some concrete recommendations on investing in rural youth and on policies that can benefit rural youth. We therefore conclude the paper with the recommendations below.

6.1 Invest in agriculture

As shown by the quantitative analysis and the review of existing evidence, African youth in rural areas continue to engage in farming, and the absolute numbers of rural youth participating in farming are expected to continue rising as the youth bulge occurs in the coming decades. In those countries where data have been analysed, more than half the youth aged 18-24 years are farming. Moreover, the majority of those youth who are not farming are likely to engage in the non-farm agrifood system (AFS), which depends on the multiplier effects derived from the farm sector. Therefore, if investments are to be made to expand the youth opportunity space as well as enable rural youth to effectively take advantage of existing opportunities, a large share of the investments must be in the agriculture sector. The bigger question is how to invest in agriculture or where, in terms of the subsectors within agriculture that youth are more likely to engage in, in a beneficial way.

Here, a recommendation is to focus on productivity-enhancing investments in agriculture. Increasing productivity within agriculture will enable the returns to agricultural employment to increase and in turn the returns to rural youth. Investments in agricultural research and development and in market access to farm inputs have been shown to result in increased agricultural productivity. Investing in these areas is likely to benefit rural youth employed on farms. In addition, investments in access to productive agricultural assets would be needed. Evidence has shown that rural youth do not have adequate access to productive assets, especially agricultural land and water. Investing in mechanisms and policy reforms that enable land rental markets to function efficiently is likely to result in improved access to land for rural youth and in turn lead to increased efficiency in general (Chamberlin and Ricker-Gilbert, 2016; Deininger et al., 2017). In addition, improving access to land for rural youth would probably abate rural-urban migration that is caused by the push factor of lack of access to land (Kosec et al., 2017).

Another area to focus on within the agriculture sector is climate-resilience-enhancing investments. Climate-proofing agriculture is paramount to ensure resilience in the sector, given that climate change predictions present scenarios in which African agriculture will be more exposed to climate shocks and is likely to be more vulnerable if the necessary investments are not made sooner rather than later. Given the projections that there will be more rural youth depending on the agriculture sector and that the sector will be more exposed to climate shocks, investing in climate-proofing agriculture is tantamount to climate-proofing rural youth in Africa.

6.2 Invest in young women

Another area we highlight is the importance of investing in human capital programmes for young women, particularly those who are in the younger youth cohort (15-17 years old). It is critical to make investments that enable these young women to continue in education and ensure they complete secondary education and beyond. This includes investing in interventions that delay marriage and childbirth among rural young women. The investments should not only enable the young women to continue attending school but enhance quality of learning to ensure that by the time they complete school they have actually gained a decent education.

For those young women who have given birth or are already pregnant, programmes designed to assist them to return to school or continue learning and gain relevant job skills are important to consider as well. These programmes should enable the young mothers to adequately care for their infants, while at the same time offering them opportunities for continued education and skills development. Part of this would entail investments that encourage young women to delay giving birth to additional children, as this often adds a further burden on them and prevents them from accessing opportunities for further education and remunerative labour market participation.

For those that may not have the capacity to continue their education, programmes should enable these young mothers to access productive resources and to participate in gainful economic activities, be they in agriculture or elsewhere in the economy. The design of all these proposed programmes should consider that in most cases women in this age cohort do not have much agency and the majority of their lives depends on decisions made for them by their parents or other relatives, or husbands or partners if they have already entered into marriage or cohabitation. Thus, interventions will have to be strategically targeted at these other individuals with agency over the young women in order to positively affect the young women.

Multifaceted community-level interventions, such as the ELA programme implemented by BRAC in Uganda, may also have to be explored, particularly with respect to providing life skills training and other non-cognitive skills training interventions (Bandiera et al., 2017).

6.3 Invest in continued education and skills development

The evidence shows that African rural youth are less likely to attain high levels of education than their urban counterparts, let alone their peers on other continents. Thus, it is paramount to make investments that will promote further education of all rural youth. An important aspect of this area of investment for youth is that non-cognitive skills and out-of-school programmes that have the potential to increase non-cognitive skills in youth should be considered, given that many non-cognitive skills are often learned outside school settings (Heckman and Kautz, 2013). The investment in skills development needs to take into account the evolving nature of agrifood systems and the emerging opportunities and demands that young workers have to meet in order to take advantage of them. That said, investments need to consider (1) redesigning technical education curriculum to align with current and future labour market demands; (2) promoting education-financing models (grants, scholarships, education loans), particularly targeted at young adults; (3) reconsidering the geographical distribution of education/technical and vocational education and training infrastructure; (4) providing performance-based incentives to teachers; and (5) setting up innovation hubs in rural spaces.

6.4 Invest in facilitating transitions

The evidence points to a slow transition of youth labour out of farming and into non-farm activities, predominantly within the AFS. In addition, evidence shows the significance of migration (rural to urban as well as international) as a mechanism for improving the livelihoods of youth and their families. Therefore, it will be critical to make strategic investments that facilitate efficient migration and movement out of agriculture. In this respect, the role of semirural and peri-urban areas as migration poles that attract rural youth becomes very important to consider. Thus, it would be prudent to make investments that improve the infrastructure of semirural and peri-urban areas and especially those that link the rural areas with these less rural areas.

Another aspect of transitions that is crucial is that some rural youth may not necessarily migrate from rural areas but would engage in economic activities that involve mobility between their rural homes and the peri-urban and urban areas. Given this, investing in reducing the cost of mobility between rural areas and peri-urban and urban centres may prove to be worthwhile and could facilitate the forward-backward linkages between agriculture and non-agricultural sectors in these urbanizing areas.

Investments for rural youth in the service sectors, particularly those that provide support to the agriculture sector, are another area to consider. These investments need to focus on enabling youth to transition out of agriculture into more remunerative and productive sectors within the rural economy. While the youth that will transition out of agriculture will consist of a minority, they should not be ignored and their relative contribution to the economy will likely become increasingly important given that the sectors they are transitioning into have higher productivity and returns than the agriculture sector.

6.5 Invest in the enabling environment

The data on governance indicators show that the African continent has witnessed major improvements in governance and the business climate in general. However, the degree of improvements varies substantially from country to country, with those countries that have made bigger improvements experiencing better outcomes in economic performance and in turn economic opportunities for rural youth. With respect to agriculture, our analysis of the enabling the business of agriculture indicators, rural youth poverty and agriculture value added per rural youth suggests that, in those countries where significant progress has been recorded with respect to the enabling environment, rural youth have enjoyed more returns to their labour in agriculture. Thus, given that governance and policy reforms often require financial investments, African countries need to put aside financial resources dedicated to policy reform processes that will ultimately enable youth and everyone else to benefit. Identifying the specific policies and institutional reforms will probably have to be done at country level, as each country is different and has different institutional constraints.

6.6 Invest in creating jobs that offer good prospects for large numbers of rural youth

The definition of a good job for young people may need to be revisited. In much of the narrative, a good job for a young person is considered to be one that pays well (relatively high income) and has decent working conditions and benefits. In developed countries, most youth who are employed often do not earn the highest incomes and often their jobs are considered to be stepping stones or transitory jobs that allow them to move on to better jobs in future. Thus, a good job for a young person may not be one that pays well or has the greatest perks but, rather, one that offers better prospects of income and professional career development. Therefore, if we are to judge the quality of jobs that African youth engage in, it would be useful to assess if these jobs will offer youth better prospects in the next five or 10 years. This can be assessed in terms of whether or not the jobs offer opportunity to gain relevant experience, technical skills, professional and social networks, and advanced educational opportunities. Thus, a recommendation is to invest in creating jobs that offer good prospects and particularly those that can be taken up by large numbers of youth.

Similarly, the agenda for supporting youth to become entrepreneurs may not always be the most appropriate investment response to the issue of rural youth unemployment. The majority of start-ups that are initiated by youth close down and do not always employ large numbers of rural youth. Instead, those enterprise start-ups that do not fail tend to be owned by older adults. Moreover, the evidence is not convincing that youth entrepreneurship is a pathway to employment for rural youth. Rather, rural enterprises owned by young adults and older adults appear to create more jobs for youth. Therefore, investments should target creating enterprises that employ youth in general and less emphasis should be given to rural youth entrepreneurship as a specific area of investment.

Deliberately distinguishing underemployment and employment in low-paying jobs and analysing them in a disaggregated fashion matters to inform different strategies and investments needed to address these issues. Similarly, the issue of youth engaging in multiple jobs at the same time as well as transitioning from one job to another within a very short period of time may not serve them well in terms of prospects for income growth and career development.

Beyond disaggregated analysis of youth underemployment and employment, it is important to better understand the definition of unemployment among youth. After all, those who fail to find jobs are still occupied in some way, and it is important to understand what they do and how that affects their prospects of future employment and professional development. Designing programmes that identify those rural youth who essentially become idle dependants and providing them with options, particularly for continued education and

skills development, would be worth piloting. This would be important in terms of preventing them from becoming despondent and essentially giving up on seeking employment or other occupational opportunities.

6.7 Invest in data and knowledge generation

The review showed that there is limited evidence on youth and even less evidence on rural youth. Thus, an important area of investment is generation of data and knowledge pertaining to rural youth. As resources are limited, the specific areas of data on rural youth to consider investing in might include understanding the skills needs of rural youth and the types of jobs that provide youth with better prospects of labour participation. This will require application of new metrics on the quality of jobs that youth are engaging in, in terms of the skills and experience they are likely to gain while on these jobs and the potential networks they are likely to create, which can offer them better prospects. The incomes, working conditions and benefits of jobs that youth participate in will still be important to understand.

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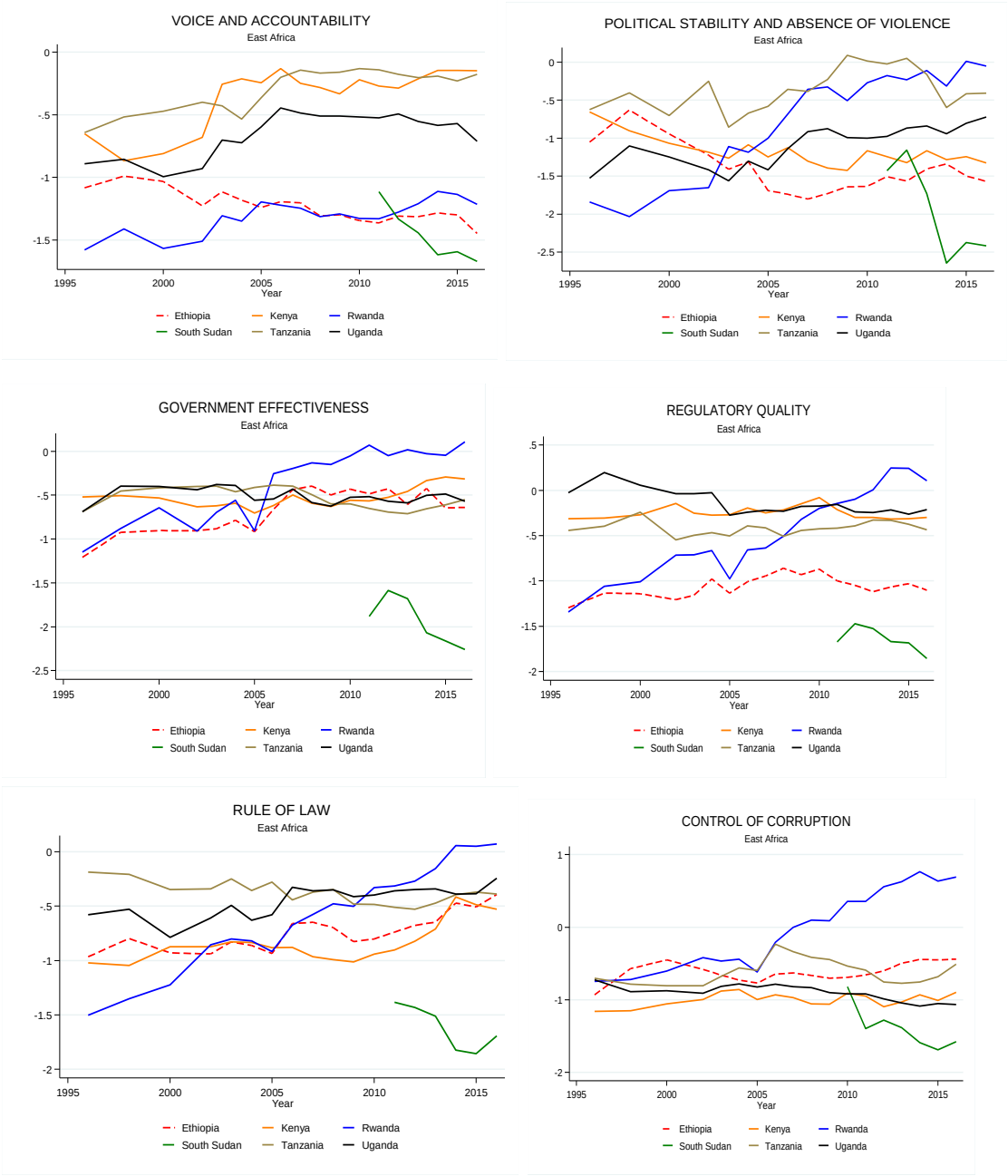
Appendix

Figure A.1. Southern Africa

Source: Authors, using Worldwide Governance Indicators data (2017).

Figure A.2. East Africa

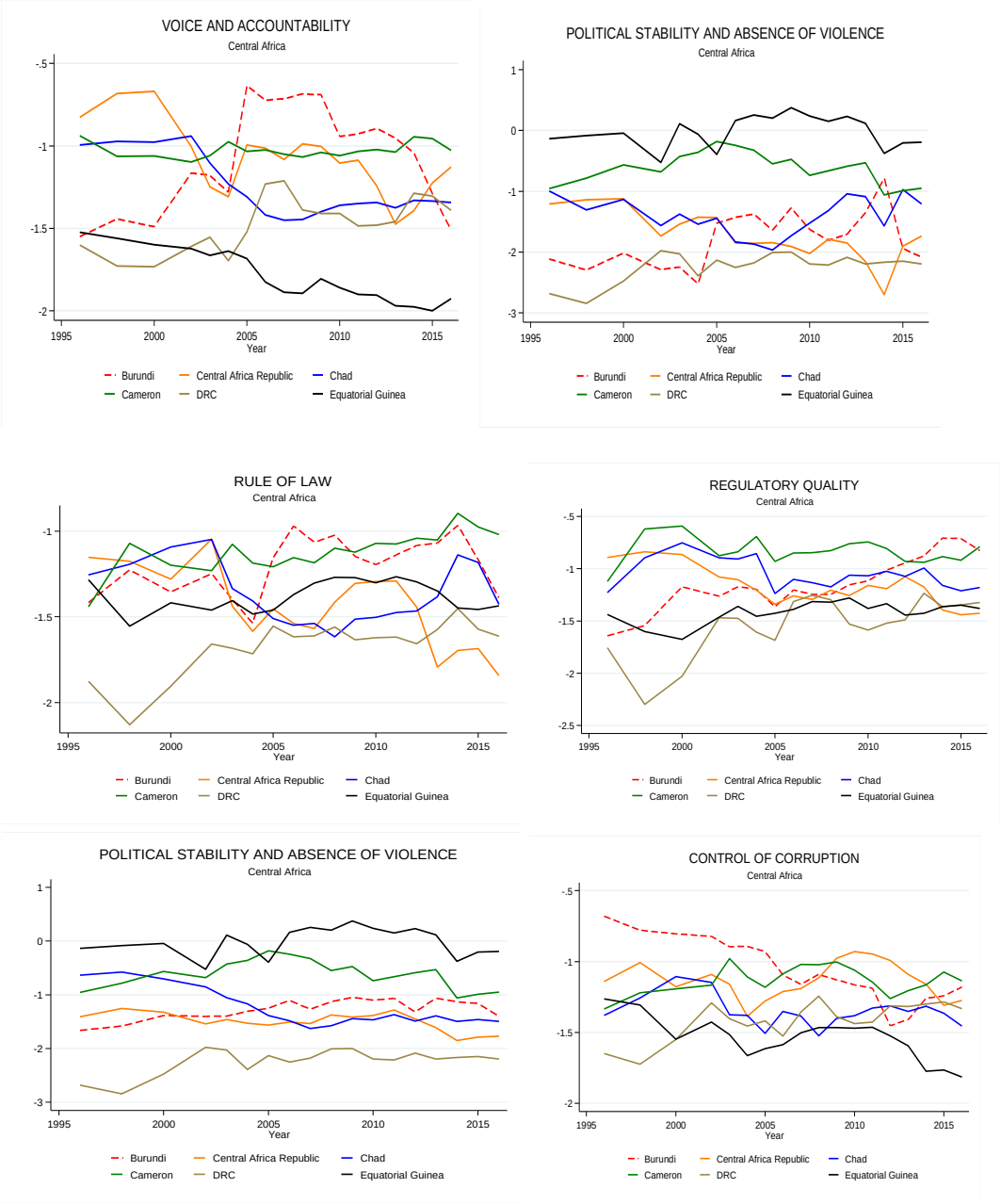


Source: Authors, using Worldwide Governance Indicators data (2017).

Figure A.3. West Africa

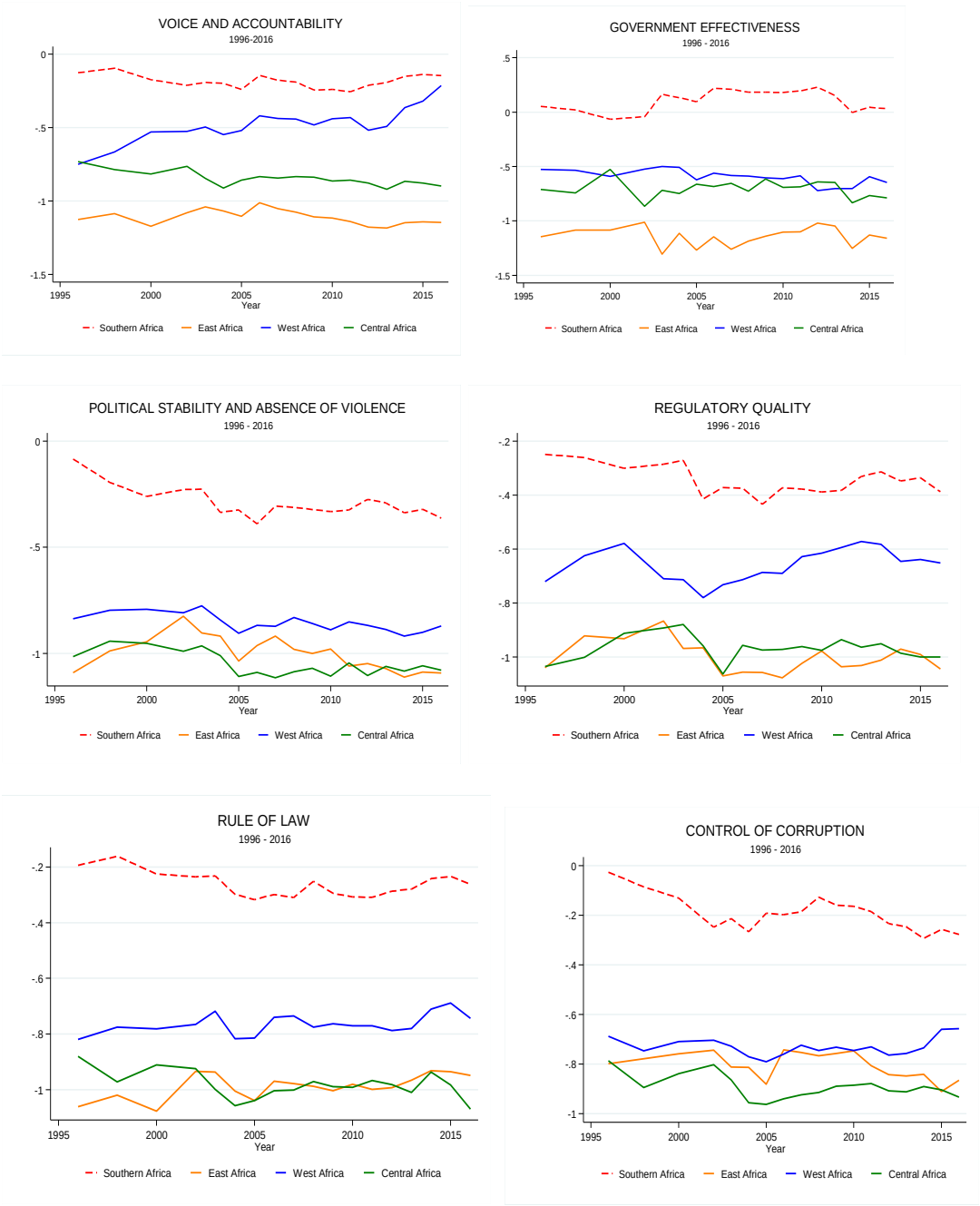
Source: Authors, using Worldwide Governance Indicators data (2017).

Figure A.4. Central Africa



Source: Authors, using Worldwide Governance Indicators data (2017).

Figure A.5. All indicators by region



Source: Authors, using Worldwide Governance Indicators data (2017).

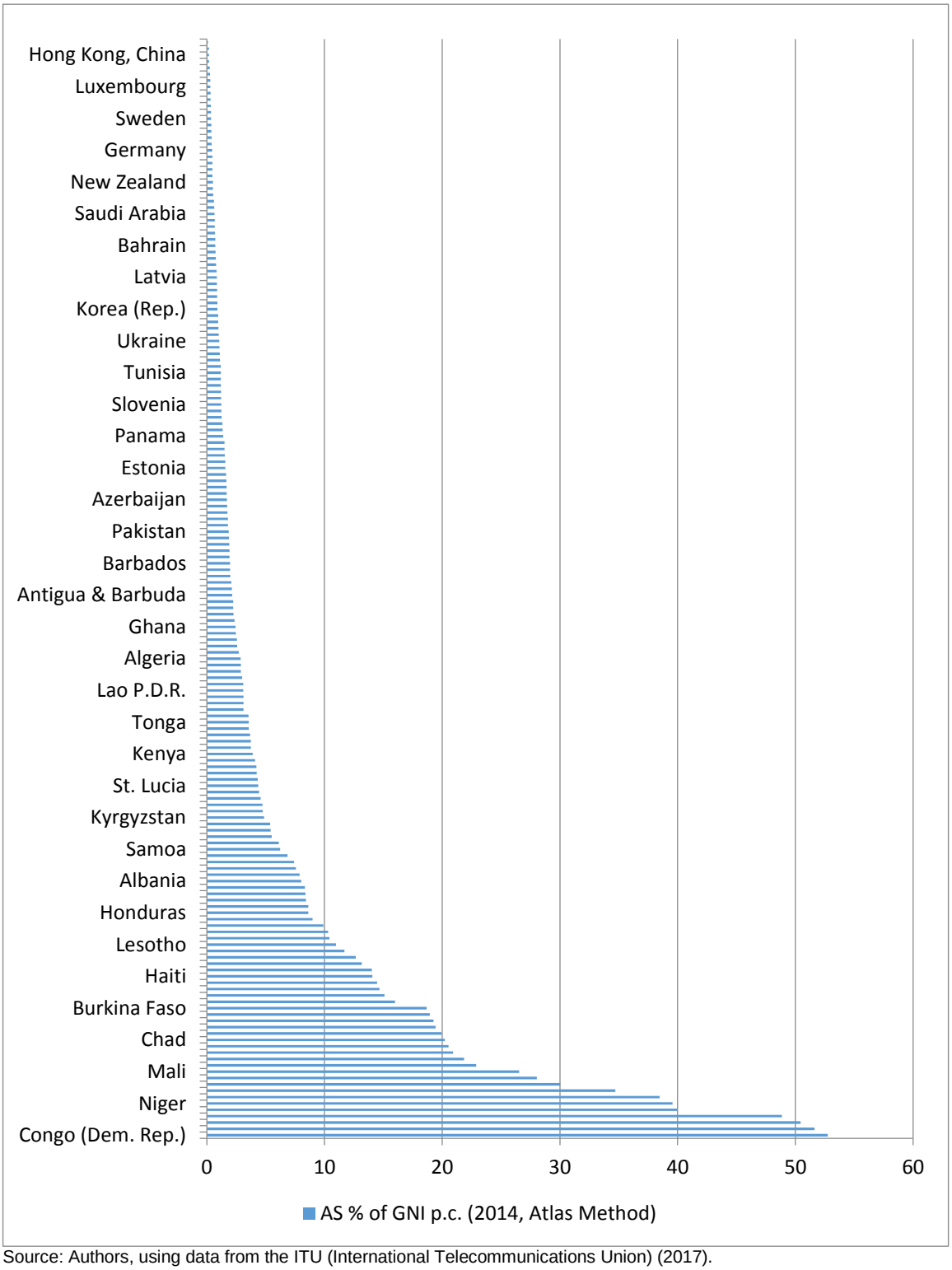
Table A.1. Mean and median ages of entrepreneurs across the world, 2010

Country	Mean age	Median age	Standard deviation	Maximum age	Minimum age
Angola	30.4	27	11.2	84	15
Argentina	43.3	41	17.2	80	18
Australia	44.2	43	17.2	89	18
Belgium	48.2	47	17.5	90	17
Bolivia	34.7	32	12.5	64	18
Bosnia and Herzegovina	42.7	43	13.6	64	18
Brazil	37.0	35	13.3	64	18
Chile	43.5	42	17.1	99	18
China	39.1	39	12.0	64	18
Colombia	38.8	39	13.4	64	18
Costa Rica	36.1	34	12.5	64	18
Croatia	49.0	50	16.4	93	18
Denmark	38.0	36	11.9	64	18
Ecuador	38.3	37	13.0	64	18
Egypt	38.6	37	13.4	64	18
Finland	42.1	43	13.7	64	18
France	47.7	46	17.8	91	18
Germany	42.7	44	12.7	64	18
Ghana	35.2	33	11.3	65	15
Greece	42.1	43	12.6	64	18
Guatemala	34.7	31	12.7	64	18
Hungary	40.3	39	12.8	64	18
Iceland	47.5	47	16.3	93	18
Iran	34.9	32	12.0	64	18
Ireland	44.2	46	12.8	64	18
Israel	39.2	38	13.5	64	18
Italy	42.0	43	12.9	68	18
Jamaica	38.2	37	12.3	64	18
Japan	46.4	46	13.2	90	18
Korea	39.0	39	12.5	64	18
Latvia	40.0	40	13.4	64	18
Macedonia	40.9	40	13.3	64	18
Malaysia	43.7	44	11.8	64	18
Mexico	36.7	35	12.9	85	18
Montenegro	39.5	39	13.4	64	18
Netherlands	54.2	55	18.4	96	18

Country	Mean age	Median age	Standard deviation	Maximum age	Minimum age
Norway	51.6	52	16.5	95	18
Pakistan	34.1	32	11.8	64	18
Peru	35.9	34	12.5	64	18
Portugal	40.5	39	12.9	64	18
Romania	50.2	52	17.9	95	18
Russia	39.7	40	13.3	64	18
Saudi Arabia	34.1	32	10.4	95	16
Slovenia	41.5	42	13.3	64	18
Spain	44.4	45	12.3	64	18
Sweden	47.3	49	13.8	87	17
Switzerland	47.4	46	17.7	98	18
Taiwan	39.8	39	12.3	64	18
Trinidad and Tobago	40.0	37.5	15.8	95	18
Tunisia	36.6	35	12.6	64	18
Turkey	38.0	37	12.8	64	18
Uganda	33.0	30	11.3	64	18
United Kingdom	49.6	50	16.5	80	16
United States	52.1	52	17.9	95	18
Uruguay	46.1	45	18.3	94	18
Vanuatu	38.4	37	12.8	79	18
West Bank and Gaza Strip	34.5	32	11.8	64	18
Zambia	32.2	30	11.5	87	15

Source: Global Entrepreneurship Monitor (2010).

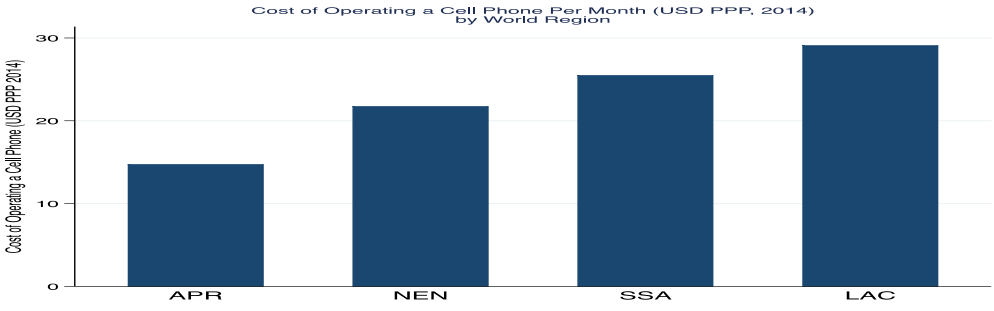
Figure A.6. Cost of operating a mobile phone as a percentage of GNI per capita (2014, Atlas method)



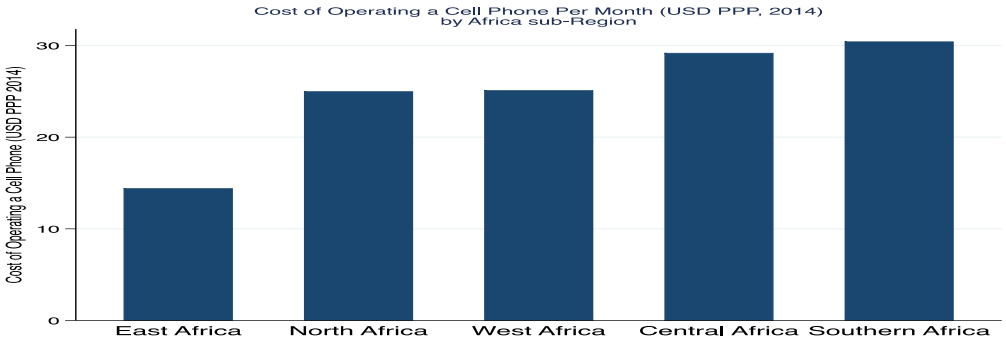
Source: Authors, using data from the ITU (International Telecommunications Union) (2017).

Figure A.7. Cost of operating a mobile phone per month (US$ PPP, 2014), by world region, Africa subregions, and SSA countries

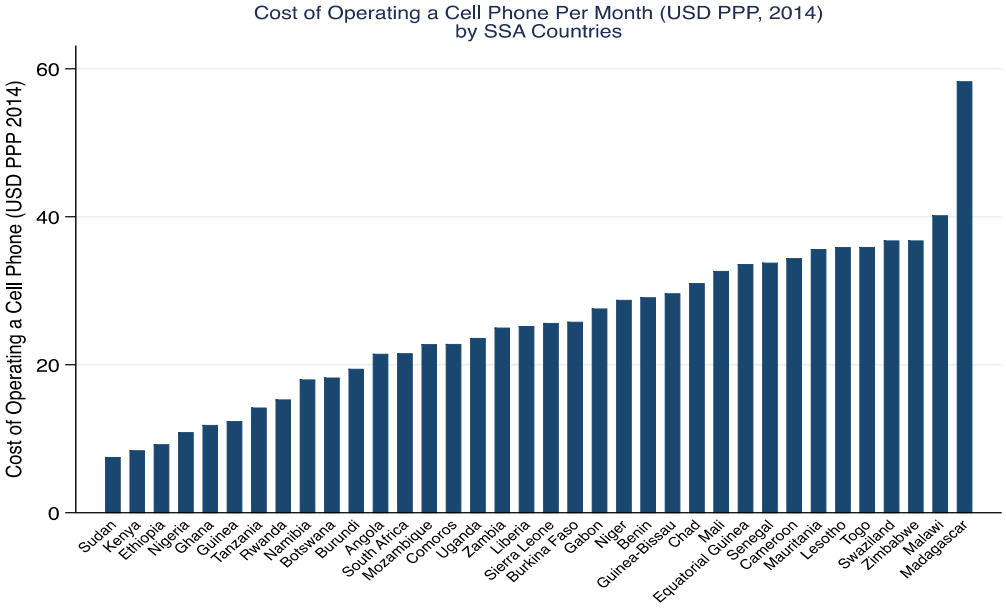
(a) Cost in US$ PPP, 2014, by world region



(b) Cost in US$ PPP, 2014, by Africa subregion



(c) Cost in US$ PPP, 2014, by SSA countries



Author's representation, using data from the ITU (International Telecommunications Union) (2017).

Table A.2. Challenges, opportunities and actions

Key areas	Challenges	Opportunities	Actions
Unemployment, underemployment, entrepreneurial opportunities	Skills mismatch Lack of experience Lack of access to resources	Demographic dividend Agility to learn new skills aligned to labour market Less risk averse Lower cost for youth labour Growing foreign direct investment and domestic investments Informal business sector	Training of rural youth to meet skills demand Business incubators and mentorship Internships and apprenticeships for rural youth Recognize the significance and scale of the informal sector and support its growth and transformation
Education, skills development (innovation opportunities)*	Inadequate curriculum High costs Distribution of infrastructure, maintenance Teacher absenteeism, lack of motivation Innovation hubs lacking	Potential for developing vocational training that responds to new opportunities, technology and globalization Opportunity to support “neglected” informal innovation sector	Redesign technical education curriculum Education-financing models (grants, scholarships, education loans) Reconsider geographical distribution of education/technical and vocational education and training infrastructure Provide performance-based incentives to teachers Set up innovation hubs in rural space
Connectivity and mobility (transport infrastructure, internet, telecom, energy; and migration, trade)	Remoteness and population dispersion High costs of transport, energy, ICT Unreliability of power supply Unreliability of ICT (outdated infrastructure; network congestion)	Youth more likely to use ICT ICT can be leveraged for economic opportunities Better road, rail, ports, communications and energy infrastructure investments growth from low base can generate extremely high returns to development	Upgrade outdated connectivity infrastructure (ICT, roads, etc.) Instal new connectivity infrastructure Encourage entrepreneurship in rural ICT activities (e.g. ICT-based extension, market information, etc.) Support development of mobile platforms for value chain services Invest in solar, biogas and microgrid infrastructure (renewable energy alternatives) Target youth for training in connectivity sector entrepreneurship, e.g. installation and maintenance of solar and biogas systems
Access to resources (e.g. land, water, finance, etc.) (environment to innovate)**	Limited access to land, water, finance, production inputs Inadequate tenure/use rights Prohibitive institutional set-up – social norms, inheritance rules Inadequate access to water (marginalization of youth access) Lack of minimum deposit amount	Potential to keep up with expanding use of modern technology by rural youth Take advantage of low-cost ICT to establish digital land registries Applying lessons from massive experience accumulated in other regions Opportunity to overcome legal limitations to support “neglected”	Facilitate access to productive resources for rural youth (land, water, finance, capital, inputs) “How it is done” matters, e.g. subsidies/transfers versus market-based approaches (land rental markets, farm inputs, finance, etc.) Institutional reforms (tenure rights, inheritance, joint titling, etc.) Facilitate efficient land rental markets Facilitate intergenerational land transfers coupled with social protection for the elderly land owners

Key areas	Challenges	Opportunities	Actions
	Lack of collateral; high (usurious) interest rates Low access to financial services, e.g. bank accounts; low credit history Gender disparities exacerbate young women's limited access Lack of framework for innovation (laws, regulations, patent offices, etc.)	informal innovation sector	Implement land tax to reduce speculative ownership of land Develop digital land registries Organize youth into groups for land rental and/or acquisition Organizational and incentives reforms (water users' associations, water pricing, cofinancing/lease-to-own schemes, maintenance of water infrastructure, etc.) Rural finance for youth programmes Mobile money platforms for last-mile financial products and services Consider removing legal restrictions on using alternative forms of collateral, e.g. future streams of income, warehouse receipts, other receivables, machinery and equipment, etc. Promote youth savings groups that could also offer credit and motivate productive investments Reduce minimum balance requirements without incurring transaction costs; consider revising age requirements for opening accounts Set up laws and regulations to enable creativity and innovation in rural space
Civic participation and youth engagement in policy and programming processes	Rural youth, in particular, are often excluded from policymaking processes Policies often fail to reflect the diversity of youth Youth aged 15-17 deserve special attention and suggest that they need to be involved in policymaking Rural youth need skills, resources and space to actively participate, contribute and influence	Increased awareness of the importance of participatory processes Increase awareness about the importance of accounting for the inputs from young people	Build individual and organizational capacity through producer organizations Institutionalize dialogues related to agriculture with youth, and design rural youth employment strategies aligned with broader national policies Support youth organizations or youth in mixed organizations, cooperatives and networks (professional and social), to enhance their participation; for youth aged 15-17, use group discussions at the community level Encourage governments to engage rural youth in their policy processes making use of existing forums

* Education and skills development (both cognitive and non-cognitive) are seen as providing the foundations for the ability of youth to innovate and as such provide the opportunity for youth to innovate.

** Access to land, capital, and other productive resources are also seen as providing the means to innovate. Thus, even if youth have attained a certain level of education and skills development, they may be constrained to innovate due to lack of access to these productive resources, which in a sense provide an environment for innovation.

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