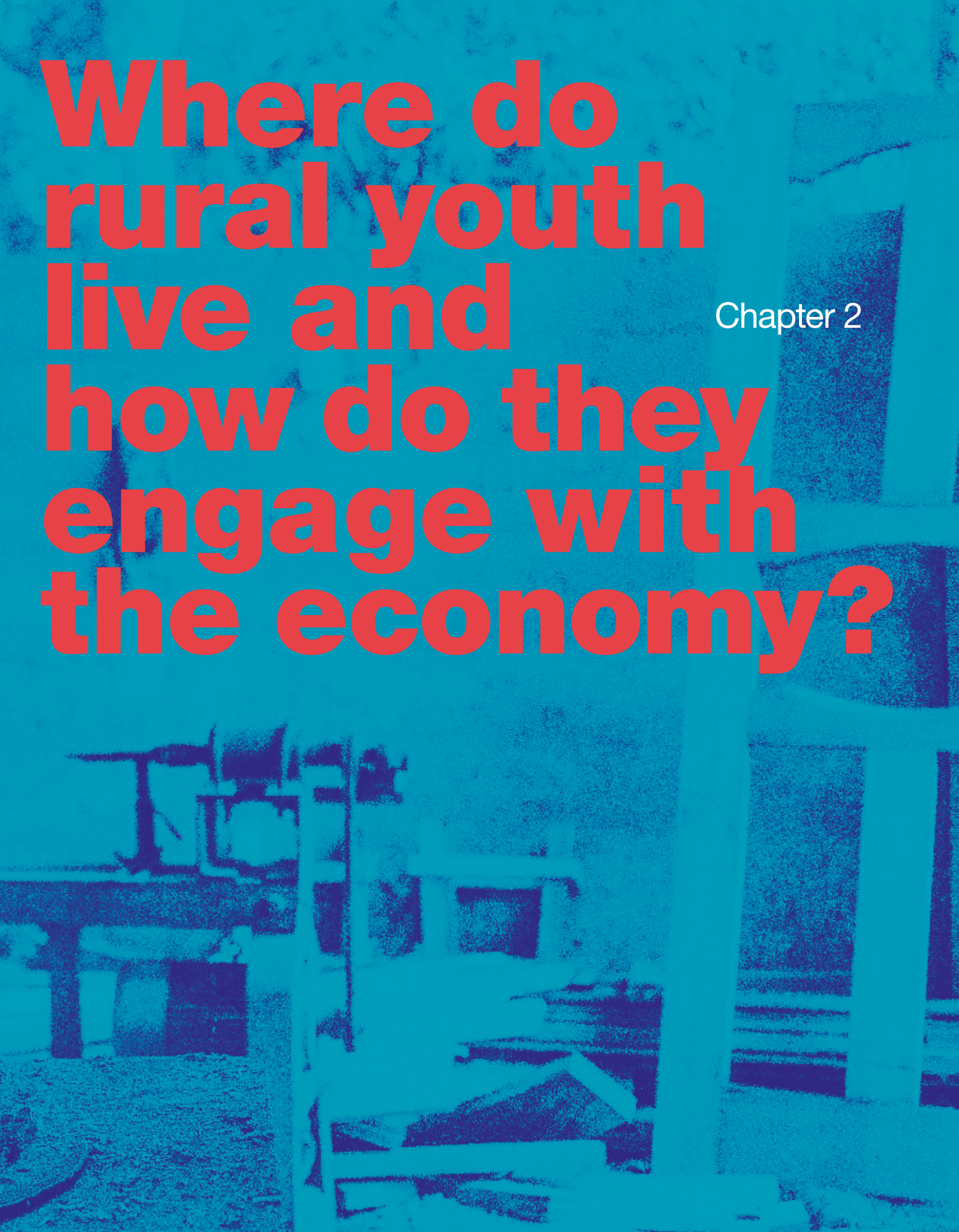
Where do rural youth live and how do they engage with the economy?

Chapter 2



Devising ways of investing in rural youth that will enable them to become productive, connected and in charge of their own future requires thinking differently about them, their families, and the countries and particular geographies they live in. This chapter uses multiple data sources, together with the typologies outlined in chapter 1, to answer a set of critical questions: Where do rural youth live around the world and within countries? What level of transformation has been reached by their countries and how does this influence the appropriate mix of policies for broad rural development versus youth-specific policies and those countries' policy design and implementation capacities? How do the agricultural potential and potential connectivity of the spaces in which rural youth live shape the opportunities that their households can offer them and, hence, their welfare?[4]

This chapter first presents the results of an analysis based on the country transformation typology outlined in chapter 1 and summarizes the key characteristics of countries in each of the quadrants, including their percentage shares of developing-country youth and rural youth. The discussion then moves on to a new classification of rural opportunity spaces which is then crossed with the country typology. This cross-mapping of geographic spaces and their varying potentials with country transformation types and their varying needs and capacities generates new insights about how policy priorities need to be adjusted across different types of countries.

To ensure the comparability of the analysis across countries, the chapter takes a new approach to defining rural spaces. Recently available high-resolution geospatial global databases are used to group the population of all developing countries into four equal population groups (quartiles) based on the population density of the spaces in which they live. For the purposes of this report, the most densely settled 25 per cent of the population is classified as urban. The other three groups – peri-urban, semi-rural and rural areas (see Jones et. al., 2016) – are jointly referred to as rural. (For further details on these definitions and an explanation of how they compare with the varying administrative definitions across countries, see **BOX 2.1**.)

These three rural subcategories are then used as a proxy for commercial potential in the rural opportunity space (ROS). These data are then paired with data from the Enhanced Vegetation Index (EVI) as a measurement of agricultural potential in order to define the full ROS. (See **BOX 2.2** for details on these variables and those used in the country typology and household classification.) Data for the country typology and ROS cover all developing countries, while data for the household transformation categories come from 13 nationally representative surveys across Africa, Latin America, and Asia and the Pacific.

4 See box 2.2 for further information on the data sources used to operationalize the three typologies outlined in chapter 1. The typologies used for this analysis are: (1) a country typology based on levels of structural and rural transformation; (2) a classification of rural opportunity spaces based on spatially defined commercialization and agricultural potentials; and (3) a classification of different categories of household transformation levels defined on the basis of their main sources of livelihood.

BOX 2.1 A globally comparable definition of rural spaces

Administrative definitions of "rural" and "urban" suffer from two weaknesses from an analytical standpoint. First, they differ across countries, which reduces the usefulness of cross-country comparisons. Second, the definitions are based on a simple dichotomy that may be increasingly at odds with how people actually live. The characteristics associated with urban and rural areas or populations have become increasingly blurred by rapid urbanization, greater rural population densities and the economic transformation of rural areas, which has driven an increase in "urban" characteristics such as a reliance on markets. The growing presence of small and secondary towns plays an important role in connecting the two geographic dimensions and catalysing commercialization opportunities. Moreover, the transformation of agrifood systems has augmented the economic linkages between rural areas and cities, heightening the need for a more fluid spatial definition. One approach for adapting to these shifts involves an increasing use of the concept of "peri-urban areas" (Simon et al., 2006; Simon, 2008). These areas can be viewed as rural locations that have "become more urban in character" (Webster, 2002) and as sites where households pursue a wider range of income-generating activities while still located in what appear to be "largely rural landscapes" (Lerner and Eakin, 2010).

Instead of applying administrative definitions of the terms "rural" and "urban", this report uses population densities to create a rural-urban continuum (see Jones et. al., 2016, for a recent application). This approach ensures comparability across regions and countries and creates a more precise spatial picture of the economic and social characteristics of individuals and households. The WorldPop project has generated spatially explicit age- and gender-differentiated population data at the level of 1 km x 1 km grids. These grids were ordered from least to most dense, and population figures were then successively summed to create four groups (quartiles) having populations of equal size ranging from the least to the most densely settled areas. The least dense quartile represents rural areas, while the most dense quartile represents urban areas. In between are the semi-rural (second quartile) and peri-urban (third quartile) areas. The bottom three population density quartiles (rural, semi-rural and peri-urban categories) are referred to as rural (i.e. non-urban) in this report.[5] The resulting thresholds and other indicators for each group are shown in the following table.

Rural gradient thresholds defined using spatial population data and shares of administratively defined rural and urban areas

	Population density threshold (1,000 people per square km)	Average population density	Administratively defined as rural* (%)	Administratively defined as urban* (%)
Rural	<=0.16	0.05	90.95	9.05
Semi-rural	>0.16 and <=0.58	0.32	68.90	31.10
Peri-urban	>0.58 and <=2.39	1.20	63.67	36.33
Urban	>2.39	7.56	10.90	89.10

* The shares of areas that are administratively defined as rural or urban are based on household data from 13 low- and middle-income countries in Asia and the Pacific (APR), Latin America and the Caribbean (LAC) and sub-Saharan Africa (SSA). They indicate how much of the geospatially defined categories on the rural-urban gradient fall into administratively defined rural vs. urban locations. For example, 9.05 per cent of the geospatially defined rural areas are in administratively defined urban areas.

5 For further information, see annex B.

BOX 2.2 Data and definitions used for the three typologies

The country typology and the rural opportunity space (ROS) typology both use globally comparable data in their definitions. The **country typology** uses data from the World Development Indicators for a sample of 85 low- and middle-income countries in Asia and the Pacific (APR), sub-Saharan Africa (SSA), the Near East, North Africa, Central Asia and Europe (NEN), and Latin America and the Caribbean (LAC). Structural transformation (ST) (shown on the vertical axis) is proxied by non-agriculture value added as a percentage of GDP, while rural transformation (RT) (shown on the horizontal axis) uses agricultural value added per worker in constant 2010 US dollars. Quadrants are defined based on mean ST (80 per cent) and median RT (US$1,530). The median (instead of the mean) is applied to RT because, unlike the ST indicator, its indicator has no upper bound, making the mean a poor measure of the central trend.

For the **rural opportunity space**, the three rural gradations (rural, semi-rural, and peri-urban) from BOX 2.1 are used to proxy for commercialization potential; this is then paired with the Enhanced Vegetation Index (EVI) to proxy for agricultural potential. Commercialization potential (on the vertical axis) increases in step with connectivity to people, markets, ideas and information. It also influences what incentives there are for rural youth to invest in productivity, both on and off the farm. Commercialization potential can be measured by a combination of road density, average time to the nearest market or population density, with each of these measurements posing its own challenges (Sebastian, 2007; Sumberg et al., 2018). Here, spatially explicit global population density data are used to proxy for commercialization potential based on the assumption that it correlates with agricultural commercialization, off-farm diversification and market density (Bilsborrow, 1987; Wood, 1974).

Vegetation indices derived from remote sensing data are increasingly being used as a proxy for agroecological potential as a means of facilitating global comparisons (Jaafar and Ahmad, 2015; Chivasa, Mutanga and Biradar, 2017). The EVI, excluding built- and forested areas, is used here to measure the influence of geography on the potential for productivity in farming (see FIGURE 2.4). Global EVI data covering all developing countries at a 250 m x 250 m resolution were aggregated to the 1 km level to match the resolution of the population data. These grids were ordered from the lowest to the highest potential, and all the area measurements were summed to create three groups (terciles) of an equal total land area, ordered from the lowest to the highest agricultural production potential.

Household transformation categories are based on data from representative household income/expenditure surveys taken in 13 countries in the SSA, LAC and APR regions covering a total of 767,008 individuals in 188,996 households. Two variables were computed for each household: non-farm income as a share of total income, which represents the household's level of rural transformation, and farm sales as a share of total farm income, which serves as a measure of their level of agricultural transformation. These data are also used to create individual-level indicators of school-to-work transitions as well as full-time equivalents (FTEs) of time devoted to six sectoral and functional employment categories for use in analysing youth engagement in the economy. For the full list of surveys in each country and further information on the methodology and data used, see annex C: Definition of variables and methodology.

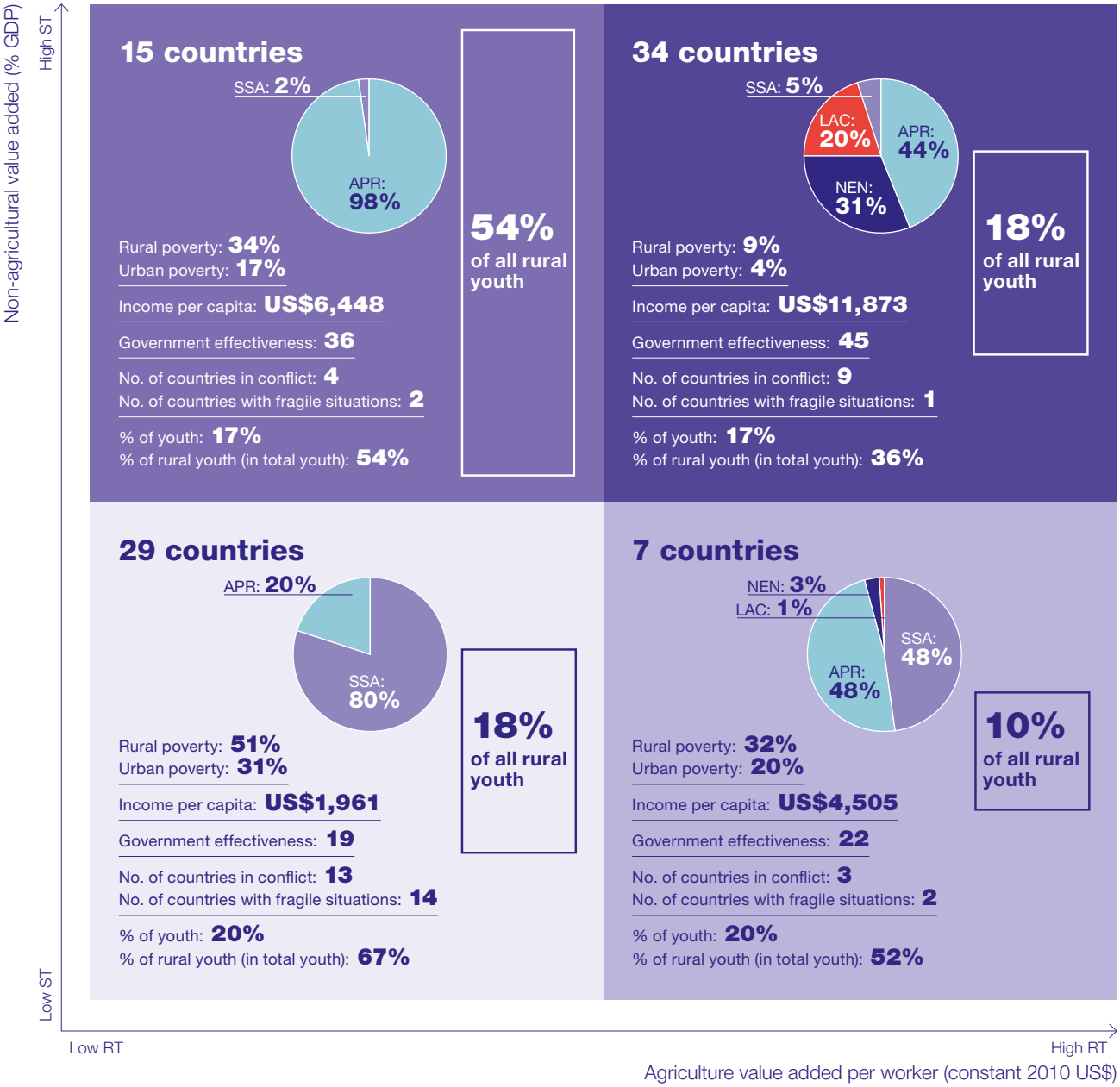
The challenges for rural youth in the least transformed countries are extremely daunting, yet these nations account for only about 20 per cent of the developing world's rural youth population

Globally, about 20 per cent of the developing world's rural youth live in its most transformed countries, another 20 per cent in the least transformed, and the rest in countries with mixed levels of transformation

Overall, 72 per cent of the developing world's rural youth live in countries with low levels of rural transformation (i.e. agriculture value added per worker below US$1,530) (see the two left-hand quadrants in FIGURE 2.1). Young people have a tough time escaping poverty by engaging in farming activities in these countries; most will earn a better living by transitioning into other sectors. Among those countries with low levels of rural transformation, some have achieved relatively high levels of structural transformation (the top-left quadrant), which means that the non-farm sector comprises a larger share (more than 80 per cent) of the total economy, and people therefore have more off-farm livelihood opportunities. These countries, nearly all of which are in Asia and the Pacific (APR), are home to over half of the developing world's rural youth population, with India and China being the dominant countries in this group. In countries with low levels of transformation in

FIGURE 2.1 Where do the world's rural youth live?

Distribution of rural youth and selected country characteristics, by country transformation category



Notes and sources: Regional percentages in the pie charts represent the distribution of rural youth among regions by ST-RT group. Eighty-five low- and middle-income countries based on the World Bank definitions and 2018 data are classified into ST-RT groups using the median value of agricultural value added per worker for RT (1,529 US$) and the mean value of the share of non-agricultural value added in GDP for ST (80%), in line with IFAD's 2016 definitions. Poverty is measured as the poverty headcount ratio at $1.25 a day (2011 PPP) (% of population) (*source:* World Development Indicators, World Bank). Income is measured as gross national income (GNI) per capita, at purchasing power parity (PPP) (constant 2011 international dollars) (*source:* World Development Indicators, World Bank). Government effectiveness is measured as the percentile rank in the Worldwide Governance Indicators (*source:* World Development Indicators, World Bank). The definition of a country in conflict is taken from the Uppsala Conflict Data Programme/Peace Research Institute Oslo Armed Conflict Dataset (*source:* Baliki et al., 2018). The definition of fragility is based on the Harmonized List of Fragile Situations for fiscal year 2019, World Bank, 2015 (*source:* United Nations Department of Peace Operations (DPO), African Union and European Union websites).

both dimensions (the bottom-left quadrant), farming offers low returns and opportunities off the farm are limited. These countries host 18 per cent of the developing world's rural youth population, 80 per cent of whom reside in sub-Saharan Africa (SSA).

The remaining 28 per cent of rural youth reside in countries that have achieved relatively high levels of rural transformation (the two right-hand quadrants in the figure) and offer more attractive opportunities in farming. And nearly two thirds (18 per cent overall) of the members of this group are found in countries that have transformed in both dimensions (top-right quadrant). Rural youth in this category enjoy, on average, the best economic opportunities and have a good chance to earn enough either on or off the farm to position themselves well above the poverty line. Although these countries have a very low rural poverty rate of only 9 per cent, they nonetheless have small pockets of persistent rural poverty that have proven difficult to tackle.

Finally, the smallest group, with 10 per cent of the developing-country rural youth population, is composed of countries where farming can yield relatively attractive returns but where there are limited off-farm opportunities (the bottom-right quadrant). These countries may seem similar to the other mixed group (high structural transformation but low rural transformation, shown in the top-left quadrant) in terms of poverty levels, but average incomes are lower and their rural youth population is quite likely to encounter a different structure of opportunities. Whereas farming or related off-farm sectors of the agrifood system (AFS)[6] can offer good opportunities in countries with higher levels of rural transformation, off-farm opportunities are more likely to absorb rural youth in countries with higher levels of structural transformation but lower levels of rural transformation. In fact, 90 per cent of rural youth in Nigeria (a country with a low level of structural transformation and a high level of rural transformation) are engaged in AFS work, while, in Bangladesh (with a high level of structural transformation but a low level of rural transformation), almost half of the young population works outside the AFS. On average, rural youth in Nigeria allocate 70 per cent of the time that they spend working to their households' farms, whereas, in Bangladesh, non-AFS wage activities predominate (34 per cent of FTEs).

The "youth bulge" is found in the least transformed – and poorest – countries, particularly in Africa.[7] **FIGURE 2.2** shows the past and projected shares of overall and rural youth in the developing world by structural and rural transformation levels (top) and region (bottom). Three patterns stand out. First, the share of youth in today's total population is rising only in the least transformed countries. In all other country types, the percentage share of youth is either flat, as in countries with low structural but high rural transformation levels, or declining. In countries with the highest level of transformation, this share is declining rapidly. While today more than 50 per cent of rural youth live in countries with high structural and low rural transformation levels (as documented in **FIGURE 2.1**), the global distribution is likely to be dominated by the least transformed countries in the coming decades.

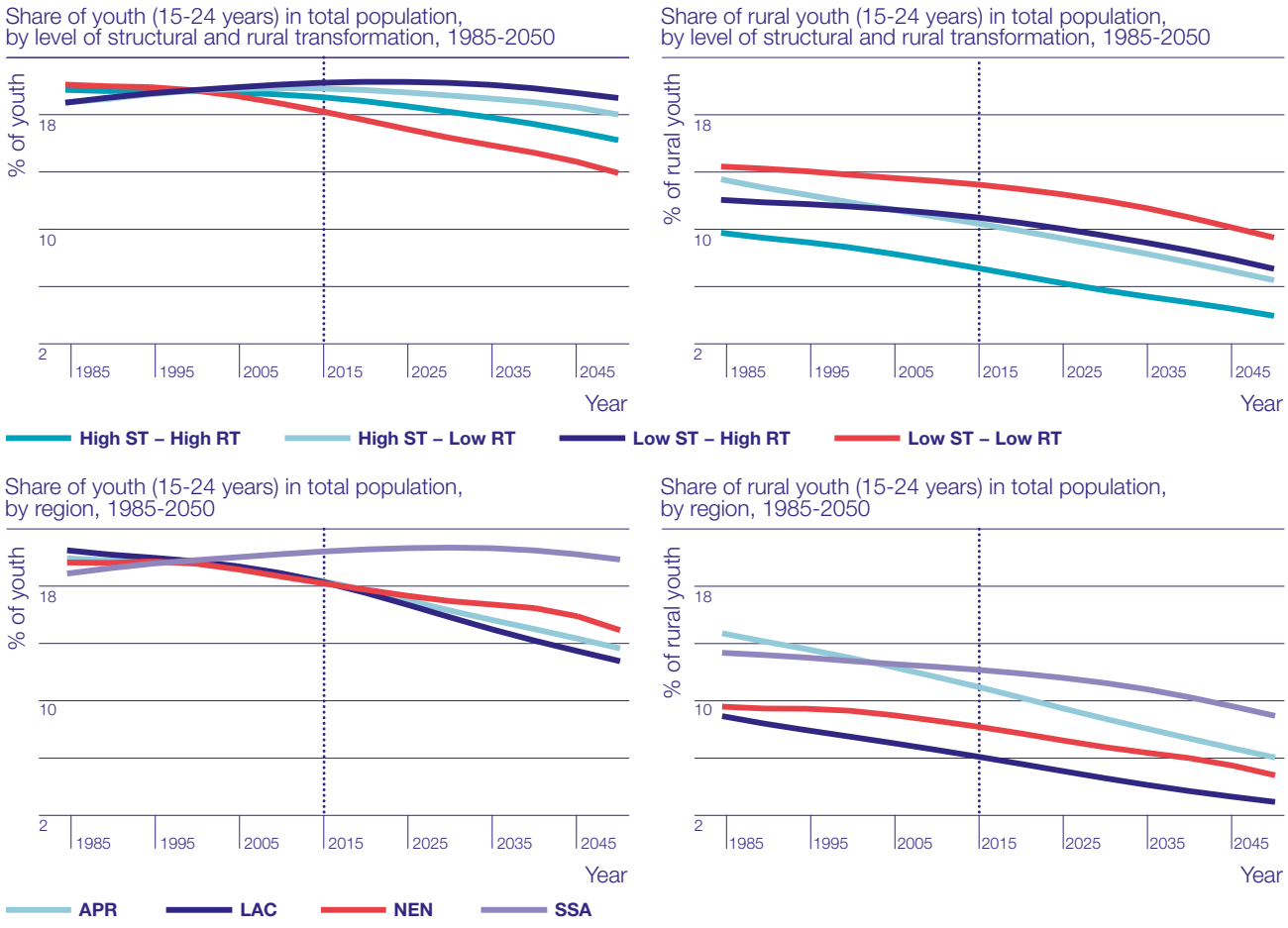
Second, the regional pattern is stark: the share of the youth population is rising in Africa and is projected to continue to do so (although at a moderate pace) over the next

6 The agrifood system, or AFS, is defined as the set of supply chains stretching from the supply of inputs and services, through production on the farm and all the post-farm activities that result in the retailing of food (including food prepared and consumed away from home) and other agricultural commodities to consumers. Work outside the AFS is any work taking place outside of these agriculturally related value chains.

7 The youth bulge is the common phenomenon for a period early in the demographic transition during which children and youth comprise a large and increasing share of the total population. This occurs when the decline in fertility has not yet caught up with the decline in mortality.

FIGURE 2.2 The share of young people in the total population is projected to decrease everywhere except in the least transformed countries and in sub-Saharan Africa. The relative size of the rural youth population is decreasing everywhere

Projected population share of youth and rural youth up to 2050, by country transformation level and region

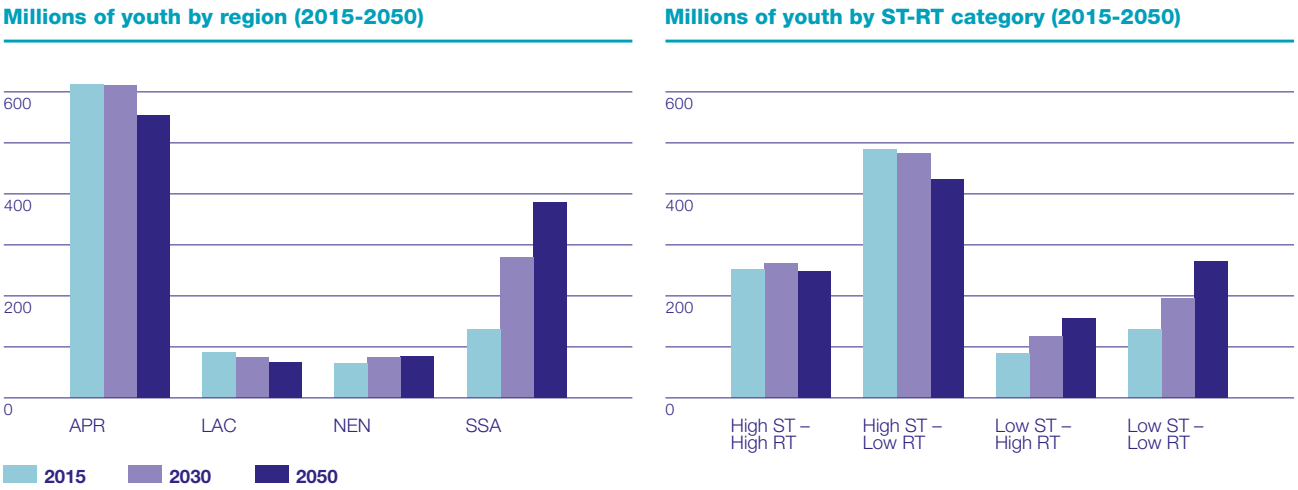


Notes: SSA: sub-Saharan Africa; APR: Asia and the Pacific; NEN: Near East, North Africa, Europe and Central Asia; LAC: Latin America and the Caribbean.
Source: Authors' calculations based on United Nations *World Population Prospects: The 2017 Revision*. The dataset covers 85 low- and middle-income countries (based on the World Bank definitions and data for 2018).

20 years. In every other region, these shares are falling rapidly. By 2050, the shares of the total population represented by the youth population in the rest of the world are projected to amount to around 13 to 15 per cent, while in Africa that share will have fallen only slightly from its current level of 20 per cent. Essentially, the developing world's youth bulge is an African youth bulge.

Third, in every region and in every country category, the share of *rural* youth in the population is declining sharply. Here, too, Africa lags behind the rest of the world, but even Africa's share of rural youth is projected to fall below 10 per cent by 2050. The widening differential between the overall percentages of young people in the population and of rural youth in the population derives from the urbanization process, which is a global phenomenon: as measured on the basis of administrative divisions, the urban population expanded from 33 per cent of the total population in 1990 to around 50 per cent in 2015.

FIGURE 2.3 The number of young people is growing rapidly in sub-Saharan Africa and in countries with low levels of structural transformation



Note: ST: structural transformation; RT: rural transformation; APR: Asia and the Pacific; LAC: Latin America and the Caribbean; NEN: Near East, North Africa, Europe and Central Asia; SSA: sub-Saharan Africa. The dataset covers 85 low- and middle-income countries (based on the World Bank definitions of these categories and data for 2018).
Source: Authors' calculations based on *United Nations World Population Prospects: The 2017 Revision*.

Yet what captures the attention of policymakers is not the relative size of the youth population, but rather its absolute size, as the total number of young people will rise significantly in some countries and regions in the coming years (see **FIGURE 2.3**). The total number of young people is projected to climb very little or even decrease by 2030 in both sets of countries with high structural transformation levels. In both types of countries with low structural transformation levels (both those with low and those with high levels of rural transformation), on the other hand, the number of young people is projected to rise. The rate of increase is particularly striking in the case of the least transformed countries, where projections point to a doubling of the number of young people by 2050 (from about 135 million in 2015 to about 270 million by 2050). Once again, the regional pattern is stark: the number of young people in Africa is projected to more than double by 2050, while it is projected to climb around 20 per cent in NEN and to decrease in other regions.

Africa's slow demographic transition is driving these patterns and is posing major challenges for future growth and transformation on the continent

The demographic transition (see chapter 5) starts with declines in mortality that lead to rapid population growth and younger age structures; it then continues with declines in fertility that lead, over time, to an ageing population. A key determinant of a country's ability to grow and make needed investments in fundamental capabilities is the speed with which this transition occurs. Countries that transition rapidly and make the right investments can earn a "demographic dividend" of rising national savings that create the possibility of further investments in fundamental capabilities. Those that transition slowly struggle in this respect.[8]

8 See chapter 5 for a discussion on the second demographic dividend, which can be secured when populations start ageing if countries invest heavily in their fundamental capabilities during the period when the dependency ratio is low.

Slow transitions occur when the extent of fertility declines following the onset of reductions in mortality is small and takes longer to become evident. Countries experiencing slow transitions spend more time with high dependency ratios, meaning that the working-age population has to support a larger number of children and older adults. This has two implications. First, per capita income rises slowly. Second, structural and rural transformations proceed slowly. Rapidly growing populations (which means that the youth population is growing rapidly), low and slowly rising income levels, and the related scarcity of fiscal resources and consequently limited operational capacity of government all combine to impede the kinds of intensive, high-quality investments in education, technology and infrastructure that drive these transformations. This lack of sufficient high-quality investment during this critical stage can have long-term negative impacts on economic growth and poverty reduction. For example, high fertility rates in Nigeria (which had the third-highest number of new births in the world in 2018 (UNICEF, 2018)), are projected to lead to significantly lower income levels in 2100 than would be the case in a low-fertility scenario (Canning, Raja and Yazbeck, 2015).

The least transformed countries are also the most fragile

FIGURE 2.1 shows that civil conflict arises in all types of countries, as the share of countries experiencing conflict ranges from about 25 per cent among more structurally transformed countries (top two quadrants) to about 45 per cent among those that have undergone less of a transformation in this dimension (bottom two quadrants) (Baliki et al., 2018). Fragility, on the other hand, is heavily concentrated in the least transformed category, which accounts for 14 of the 19 fragile countries in the world.[9] The concentration of fragile States in this country category has to do with their very low rating in government capacity, which is a key element in the definition of fragility. Estimating the number of rural youth subject to these conditions of fragility and conflict is very difficult due to data issues. While conflict tends to be spatially concentrated and hence affects a small share of the population, fragility is a systemic problem reflecting an overall lack of capacity to address and contain conflict and to invest in rural transformation. Assuming that a country's fragile status impinges upon all rural (non-urban) youth, then around 50 million rural youth face limited livelihood opportunities as a result of this type of fragility. The multiple ways in which fragility and conflict influence rural youth opportunities and how these factors can be addressed are discussed in detail in the spotlight section entitled "Rural youth in fragile situations and conflict" near the end of this chapter (see also box 2.5 for an example).

The types of investments needed to support rural youth and the ability of governments to make these investments vary greatly across these country groups

The least transformed countries clearly are in the greatest need. They have the largest average overall share of the youth population (20 per cent), the lowest per capita incomes and the highest poverty rates (in excess of 50 per cent in rural areas).[10] Meanwhile, the most highly transformed countries have average per capita incomes above $10,000, poverty headcounts lower than 10 per cent in both rural and urban areas, and an average

9 Fragile States are States with little capacity or legitimacy and whose citizens are therefore vulnerable to a range of socio-political shocks. This report uses the World Bank's Harmonized List of Fragile Situations for fiscal year 2019.

10 Rural and urban poverty headcount ratios have been taken from the disaggregated measures commissioned by IFAD for the *Rural Development Report 2016* and are based on data from around 2010.

share of the youth population of only 17 per cent. Clearly, the need is greatest in the least transformed countries, which also have the lowest level of potential fiscal revenues for use in addressing those needs.

In general, a government's ability to use these funds effectively will also be greater in the most transformed countries. The Government Effectiveness Index measures "perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" (Kaufmann et al., 2010, p. 3). These are indicative of a country's ability to invest effectively, including in its rural youth. The Index correlates primarily with the level of structural transformation, rather than rural transformation: countries in the two bottom quadrants of **FIGURE 2.1** exhibit nearly identical measurements of government effectiveness, which are much lower than those of the two groups at the top. Unsurprisingly, the most transformed countries rank highest on this index. This sharp distinction in government effectiveness based on the degree of structural, rather than rural, transformation likely stems from the fact that countries that have undergone little structural transformation have, by definition, relatively undiversified economies and thus have not developed the broader set of public sector capabilities needed to manage the types of more diversified economies found in more structurally transformed countries.[11]

An overwhelming proportion of the developing world's rural youth live in areas with relatively high population densities and a strong agroecological potential

The concept of a rural opportunity space (ROS) that was introduced in chapter 1 relates to the first two elements of the foundations of rural youth development, which are at the centre of this report: helping them to become *productive* and *connected* individuals who are in charge of their lives. Examining the spaces in which rural youth live reveals a compelling story (see **FIGURE 2.4**).

First, two out of every three members of the total 778 million non-urban youth population in developing countries live in the most agroecologically productive areas. Only 7 per cent live in areas with the lowest potential. This concentration of the rural population, and thus of rural youth, in the most productive areas is not surprising, as it reflects (especially in Africa) the historical movement of agriculture-dependent populations to the most productive and least disease-prone areas of the world. This spatial pattern suggests that agricultural potential per se is not a primary constraining factor for a majority of rural youth. If their farming productivity is low, then the reason lies in their lack of access to markets for inputs (especially water, improved seed and fertilizer) and markets for their output that would provide incentives to invest in increased productivity.

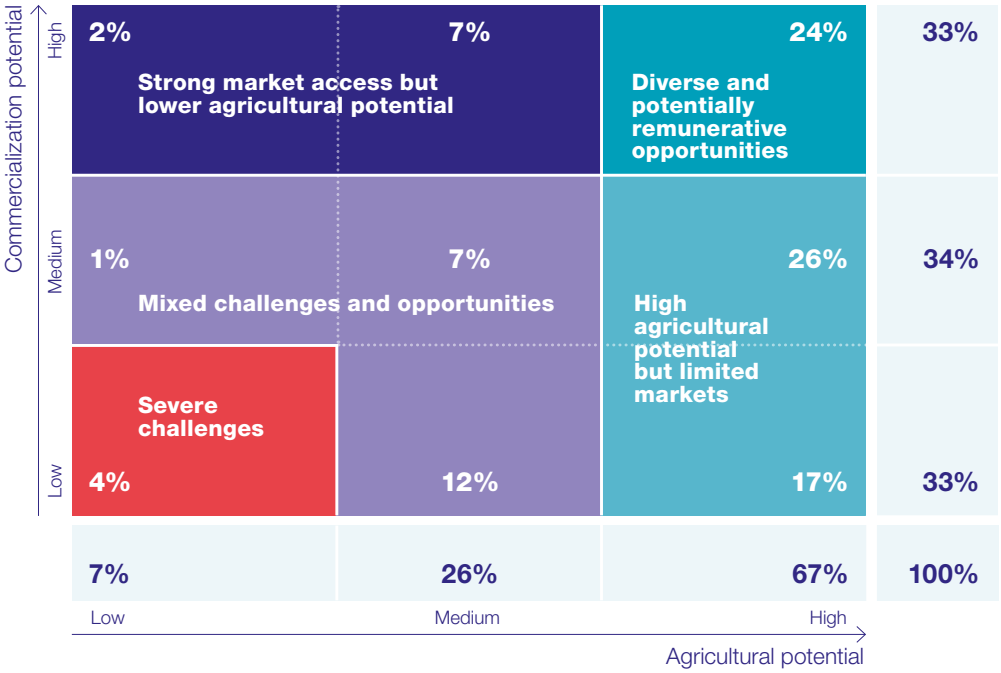
Second, the vast majority of rural youth live in relatively densely settled areas. The least connected one third of the non-urban population (the bottom row in **FIGURE 2.4**) occupy 92 per cent of the non-urban land area, while the remaining two thirds live on the other 8 per cent of non-urban land (not shown in the figure). This means that two thirds of the rural youth population live in areas that are, on average, *twenty-three times*[12] more densely populated than the least-connected one third. What this means is that the vast

11 Causation could also work in the opposite direction, with poor governance inhibiting the diversification of the economy. Exploration of this issue is beyond the scope of this chapter, however.

12 (0.67/0.08)/(0.33/0.92) = 23.3.

FIGURE 2.4 Two out of three rural youth in developing countries live in rural opportunity spaces with high agricultural potential

Modified rural opportunity space



Notes: Commercialization potential is defined using 2015 population density data for 85 low- and middle-income countries from the WorldPop project. All grids are ordered from least-to-most dense, and cut-offs are set to place 25 per cent of the population in each of four groups. The highest-density quartile is categorized as *urban*. The remaining three non-urban quartiles each hold one third of the *non-urban population* and define the three groups of the rural-urban gradient: rural, semi-rural and peri-urban. These labels represent the low, medium and high commercial potential categories on the vertical axis. Agricultural potential is defined using the Enhanced Vegetation Index (EVI) of the Moderate Resolution Imaging Spectroradiometer of the National Aeronautics and Space Administration (MODIS-NASA) for the same grids, ordered from lowest to highest. Each of the three groups (terciles) corresponds to one third of all *non-urban space* and together they represent the low, medium, and high agricultural potential categories on the horizontal axis.

majority of non-urban land in the developing world is very sparsely populated, while the vast majority of rural residents live in areas that are relatively densely populated.[13] The potential for connectivity – with markets, information, ideas and possibilities – is thus relatively high for many of the developing world's rural youth. If these young people are poorly connected and lack opportunities, then the reasons do not lie in the potential productivity and connectivity of the land and spaces that they occupy. Rather, they have to do with the level of transformation in the broader economy in which they live, the characteristics of the households in which they reside and constraints specific to youth and their individual characteristics.

The patterns identified above lend themselves to a classification of the rural opportunity space (ROS) based on five categories that capture the broad challenges and opportunities faced by developing countries' rural youth. **Around one quarter of all rural youth in developing countries live in areas that combine the highest degree of agroecological potential with the strongest potential connectivity** (top-right cell in **FIGURE 2.4**). **These youth will have *diverse and potentially remunerative opportunities*,**

13 Note that the great majority of these households are also classified as rural according to national administrative definitions (see box 2.2).

with the extent of those opportunities depending on the dynamism of the broader economy in which they reside. At the other extreme, 4 per cent of rural youth live in the least connected spaces with the lowest agroecological potential (bottom-left cell). They face *severe challenges*, again with the prospects of overcoming them depending in large measure on the broader economy in which they reside and the particular characteristics of the young people themselves and their families. Forty-three per cent of all rural youth live in spaces with a *high agricultural potential but limited access to markets,* while those in spaces with *strong market access but lower agricultural potential* represent only 9 per cent of the total. The remaining one fifth of rural youth have an opportunity space composed of *mixed challenges and opportunities*.

Combining the country transformation typology with the ROS classification provides a framework for establishing policy, investment and programmatic priorities for helping rural youth become productive, connected and in charge of their own futures (see **TABLE 2.1** and **FIGURE 2.5**). Asian countries and countries with mixed transformation profiles (HL/LH in the third column of the table), have the largest shares of most ROS categories for the simple reason that most rural youth live in these countries. The following patterns therefore focus not just on where rural youth in different ROS categories are found, but on

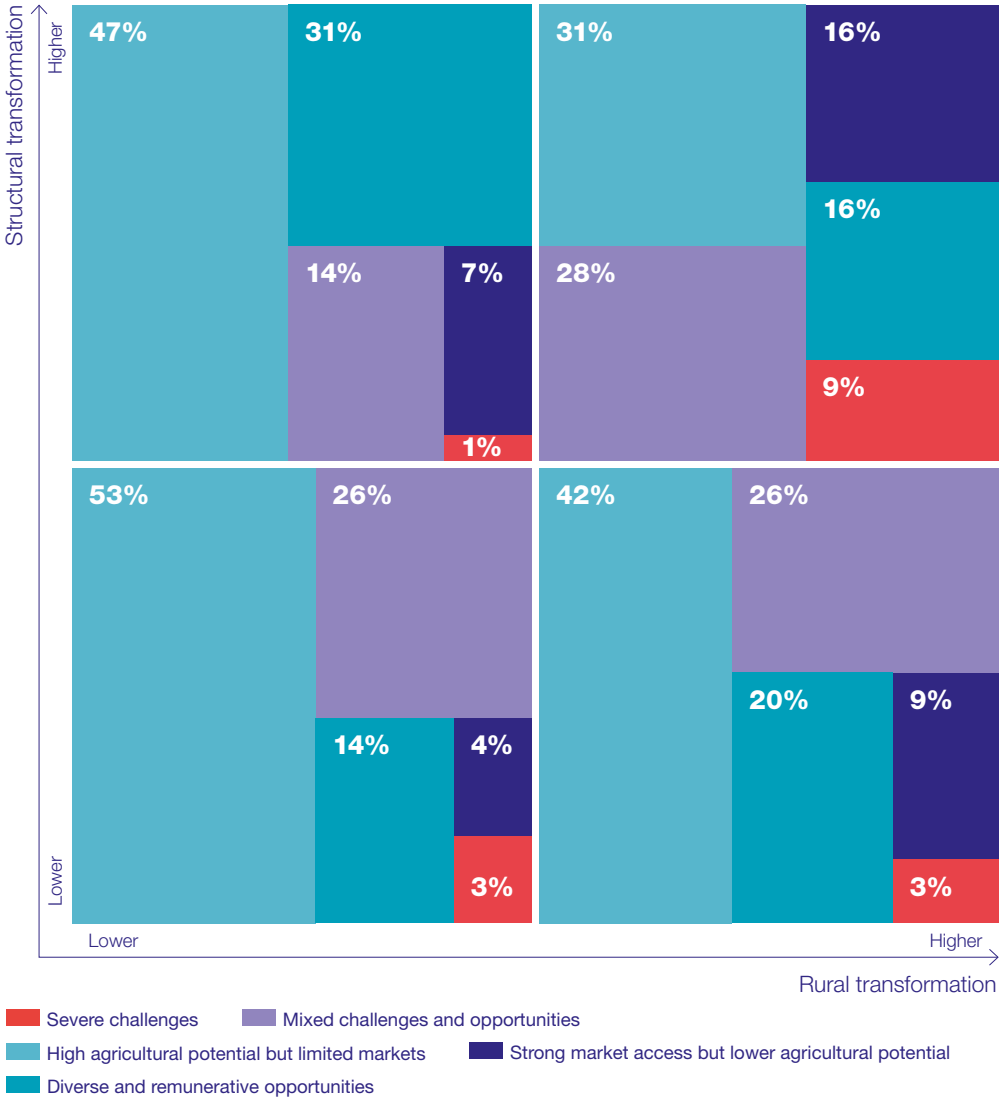
TABLE 2.1 Distribution of rural youth across the rural opportunity space, country transformation types, regions and countries

Rural youth with…	Share of all developing country rural youth	Where in the developing world do these young people reside?		Where are these young people the most prevalent?
		How are these young people distributed across ST/RT categories ? (%)	How are these young people distributed across countries? (top 3)	Regions/countries where these young people make up a large share of the total youth population
Severe challenges (SC)	**4%**	HH: **65%** HL/LH: **23%** LL: **12%** Total: 100%	Iran **22%** Brazil **9.8%** China **9.6%**	Regionally mixed. Top three countries are Turkmenistan (53%), Peru (47%) and Afghanistan (36%).
Mixed challenges and opportunities (MX)	**20%**	HH: **34%** HL/LH: **49%** LL: **17%** Total: 100%	China **19%** India **17%** Brazil **7%**	Dominated by SSA, with 8 out of the top 10. The top 3 countries are Burkina Faso (84%), Lesotho (83%) and Mali (76%).
High agricultural potential but limited market access (HALM)	**43%**	HH: **17%** HL/LH: **66%** LL: **16%** Total: 100%	China **27%** India **27%** Indonesia **5%**	Dominated by Africa, with 7 out of the top 10. The top 10 all have at least 81% of rural youth in this category. The top 3 are the Lao People's Democratic Republic (91%), Sierra Leone (90%) and the Democratic Republic of the Congo (89%).
Strong market access but lower agricultural potential (SMLA)	**9%**	HH: **44%** HL/LH: **50%** LL: **6%** Total: 100%	China **29%** Brazil **10%** Mexico **8%**	Dominated by LAC, with 5 out of the top 10 and 10 out of the top 20. The top 3 are Jordan (48%), Algeria (44%) and Tunisia (39%).
Diverse and remunerative opportunities (DO)	**24%**	HH: **16%** HL/LH: **77%** LL: **7%** Total: 100%	India **38%** China **19%** Bangladesh **10%**	Dominated by APR, with 6 out of the top 10. The top 3 countries are Bangladesh (79%), Egypt (56%) and Indonesia (46%).

Notes: ST: structural transformation; RT: rural transformation; APR: Asia and the Pacific; LAC: Latin America and the Caribbean; NEN: Near East, North Africa, Europe and Central Asia; SSA: sub-Saharan Africa.
Source: Spatially explicit 2015 population data for 85 low- and middle-income countries from the WorldPop project have been used for the determination of spatial categories, shares of the rural youth population and country distributions; data from the Enhanced Vegetation Index (EVI) of the Moderate Resolution Imaging Spectroradiometer of the National Aeronautics and Space Administration (MODIS-NASA) have also been used for the determination of spatial categories. Country transformation levels are based on the World Bank's World Development Indicators on agricultural value added and shares of non-farm income in GDP for the latest available year.

FIGURE 2.5 The least transformed countries have the largest share of their rural youth population in areas with high agricultural potential. The most transformed countries face the biggest challenge in terms of youth in isolated, low-potential areas

Youth prevalence across the modified rural opportunity space, by country transformation space



Source: Author's calculations based on WorldPop, Enhanced Vegetation Index (EVI) and World Development Indicators data. The dataset covers 85 low- and middle-income countries (based on World Bank definitions and 2018 data).

what countries they are the most *prevalent* in, i.e. on the countries where they constitute the largest share of the population. Since policy is made at the country level, this county-level prevalence is what drives rural youth policy challenges.

First, youth facing the greatest challenges in terms of their geographic environment – those in severe-challenges and mixed-challenges spaces – mostly live in the most transformed countries. This pattern can be seen both in the types of countries that most of them live in and in the locations where they are most prevalent. Across all developing countries, two thirds (65 per cent) of the 27.6 million rural youth

in severe-challenges spaces live in the most transformed countries. Over one fifth of all these young people live in Iran, followed by Brazil and China, each at around 10 per cent. This group and the mixed-challenges group are also most prevalent in the most transformed countries, as shown by the relatively large size of the corresponding boxes in the top-right quadrant of **FIGURE 2.5**. Severe- and mixed-challenges groups are least prevalent (the smallest boxes in **FIGURE 2.5**) in the countries with low rural transformation and high structural transformation levels. Regionally, the situation is less clear-cut in the case of the severe-challenges group, but the mixed-challenges group is most prevalent in Africa, as 8 of the top 10 countries in terms of the prevalence of youth in mixed-challenges spaces are in sub-Saharan Africa and 1 is in the West and Central Africa (WCA) region. Only 3.4 million of the 27.6 million young people in severe-challenges spaces live in the least transformed countries, and 60 per cent of this group (2 million) is found in Afghanistan.

As noted above, poverty is not widespread in the most highly transformed countries in which youth in severe- and mixed-challenges spaces are the most prevalent, but they do have small pockets of persistent poverty. Ghani (2010) refers to this as the "lagging region" problem. These countries should have the capacity to invest in these isolated segments of the rural youth population, as they have the most fiscal resources and the highest levels of government effectiveness. They also have, by definition, well-developed non-farm sectors and a high level of value added in their farming activities compared to other developing countries. They therefore need to invest in low-potential areas in order to develop the cognitive and non-cognitive skills and connectivity of their rural youth in order to pave the way for their fuller integration into the rest of their transformed economies. Their prime challenge may be to generate the political will to ensure that their rural transformation process is inclusive of these youth. Cultural differences may also play a role, as some indigenous communities (e.g. in Peru, Bolivia and Mexico, all of which are among the top 10 countries in terms of the prevalence of rural youth in severe-challenges spaces) remain outside the mainstream society and economy.

Second, nearly half of all rural youth – the largest group – are in areas with a high agricultural potential but limited market access (HALM). This group predominates in African economies: 7 out of the top 10 countries in terms of prevalence in this regard are in Africa (Lao People's Democratic Republic, Bhutan and Malaysia are the exceptions), and at least 81 per cent of rural youth fall into this category in each of those 10 countries (see row 2 of **TABLE 2.1**). The fact that most of these countries fall into the least transformed category means that their challenge is twofold. First, they need to improve the requisite infrastructure to connect rural youth (and the rest of the rural population) to markets for agricultural inputs and output. At the same time, they need to put policies in place that will improve access to the inputs and services required to raise agricultural productivity, which will then speed up the rural transformation process. The resource constraints that detract from their ability to do so are primarily the shortage of fiscal resources and their governments' limited capacity for designing and implementing the necessary investments and policies.

Third, only 9 per cent of the developing world's rural youth live in spaces that are in a strong position in terms of market access but have poor agricultural potential (SMLA). Put another way, it is rare to see densely settled populations in areas that have a low or medium level of productive potential. Here again, this pattern reflects the historical settlement patterns of migrating populations seeking areas of high farming

potential. By country type, this (uncommon) group is most common in the countries with mixed transformation levels. Regionally, although the top 3 countries in terms of prevalence are in NEN, LAC accounts for 5 of the top 10 countries. The majority of the LAC countries are in the most highly transformed category in the country typology and have highly urbanized populations. The policy challenge here is also twofold, but with a different emphasis than in the HALM space. In short, for this region, the challenge is, first, to help these youth transition into remunerative non-farm activities as a likely best option for most of them and, second, for those interested in farming, to facilitate access to the inputs and information needed to overcome the area's limited agricultural potential. The potential degree of market access for these young people – thanks to the highly urbanized population distribution and much greater purchasing power than in lower-income countries – will facilitate the uptake of such inputs on the part of those with a preference for farming or engagement in the broader AFS.

Fourth, it is striking that one of the top three countries in the diverse-opportunities (DO) **category is a desert country (Egypt).** This, once again, reflects the movement over time of people to areas that offer opportunities (good land and good water sources) and, in more modern times, to more densely settled areas that offer commercial opportunities. The top 10 countries in terms of their shares of young people residing in diverse-opportunities spaces are mainly in APR (6 out of 10), and all of them have a high level of structural transformation. These countries need to focus on building the cognitive and non-cognitive skills of their young people so that they can seize the opportunities that the rural space offers them. Active labour-market policies may also be called for in this case, since youth unemployment rates are far higher in the most highly transformed countries, which also have more resources for dealing with the problem.

Finally, the two types of countries with mixed transformation levels (a high level of structural transformation and a low level of rural transformation and vice versa) look very similar (as can be seen from the upper left and lower right quadrants of **FIGURE 2.5**). In each of these categories, more than 40 per cent of rural youth live in HALM spaces. The percentage of rural youth in DO spaces is the highest in these countries, while very small percentages live in severe-challenges (SC) spaces. These similarities in the rural youth distribution over the ROS typology for these two types of countries suggest that their policies and investments will share certain features, since, in both cases, they will be oriented towards combining improved market access with targeted investments designed to boost agricultural productivity.

Rural youths' livelihoods are shaped by their households' level of transformation

This section brings together the ROS and household transformation categories first outlined in chapter 1 and looks at three different factors. The first is the distribution of household transformation categories across regions and the ROS. The second is how young people's households and their ROS influence the ways in which they engage with the economy and how they manage the school-to-work transition. And the third factor is how young people's households and their ROS influence youth welfare outcomes. This analysis leads to three broad conclusions. First, it indicates that the vast majority of households are either transitioning or have fully transitioned out of farming and that these patterns vary in predictable ways across regions and across the ROS. Second, rural youth largely do what the adults in their households do when it comes to allocating their time between

work on the farm and work off the farm. However, when young people do work off the farm, they are much more likely than their elders to have wage jobs rather than to be self-employed. Finally, the analysis strongly suggests that commercial potential has a larger impact than agricultural potential on youth schooling and welfare outcomes.

The vast majority of rural youth live in households that are either transitioning or have fully transitioned out of farming, and these patterns vary in predictable ways across regions and the ROS.

Previous sections of this report have shown that the countries and geographies that rural youth live in shape the challenges that they face and the opportunities that are open to them. The analysis presented in this section is based on the premise that the way that youth respond to these opportunities and challenges – how they transition from school to work, in which sectors they work and what kinds of work they do (self-employment or wage employment) – and the level of welfare that they achieve will be shaped by the households they live in and by the way these households engage with the rural economy.

BOX 2.3 A novel empirical approach to understanding rural youth, their families and their welfare outcomes

The empirical application of the household transformation categories is based on nationally representative household data from 12 countries across SSA, APR and LAC: Ethiopia, Malawi, Niger, Nigeria, Tanzania and Uganda in SSA; Bangladesh, Cambodia and Nepal in APR; and Mexico, Nicaragua and Peru in LAC (see annex C for further details). These data provide the fullest picture to date of the kinds of households that rural youth live in, how this relates to the geographic space they occupy (ROS) and how welfare and schooling outcomes vary across these dimensions. Chapter 3 uses the same framework to explore gendered dimensions of youth engagement with the economy, while chapter 6 uses it to present more detailed information on how all rural youth engage with the economy.

Though not statistically representative of their regions or of all developing countries, these analyses are important for three reasons. First, this is the most comprehensive set of microdata yet compiled on the topic of the geographic distribution and engagement of rural youth in the economy. It includes at least two countries from each region and a wide variety of countries and types of spaces within them. Coverage within SSA is especially strong. Second, the standardized definition of rural spaces across all countries used to create the ROS avoids the problems involved in defining rural spaces in diverse settings, thereby providing comparability across countries. Thus, for example, households in Mexico, Bangladesh, Nigeria or Niger whose members reside in the SC space all have similar low population densities (our proxy for commercial potential) and low agricultural potentials. What varies across countries is the level of transformation and the proportion of households and rural youth in each kind of space. Finally, the standard definitions of household types in the household transformation categories add to their comparability. What remains uncontrolled for is the broader level of transformation of the country and the income levels, poverty rates, and governance and other factors that are correlated with it, which are discussed when and as needed in the interpretation of the results.

Based on what is widely known about the role that rural non-farm income plays in increasing the incomes of rural households (Haggblade, Hazell and Reardon, 2007), it is to be expected that most rural households, in responding to their set of opportunities, will seek to add non-farm income to their portfolio and to increase the share of total income derived from such sources whenever they can. The ROS categories, listed in ascending order of the off-farm income-generation opportunities that they offer to their residents, would then be: SC, MX, HALM, SMLA and DO.

On this basis, and also considering the role of structural and rural transformation in making such non-farm opportunities available, certain expectations can be formed regarding the distribution of household transformation types across the ROS and across regions. In terms of the ROS, subsistence households are likely to be most common in SC spaces and least common in SMLA and DO spaces. Likewise, non-farming rural households[14] and diversified rural households should be most common in

14 Non-farming households include a very small percentage of landless households that are dependent on farm wage labour for their survival. These are expected to be the poorest households, while other non-farming households are expected, on average, to be the wealthiest. Because the non-farmers that are dependent on wage labour represent less than 1 per cent of all non-farming rural households, the two are grouped together in a single category.

DO and SMLA spaces and least common in SC spaces. Specialized farmers should be found most frequently in HALM spaces (which provide fewer off-farm opportunities than SMLA spaces), while transitioning households – the largest and most diverse group – should be found in similar proportions across the ROS.

Regionally, LAC has the highest levels of structural transformation, and the three LAC countries in the 12-country dataset used here follow that pattern. SSA has the lowest level of structural transformation. On this basis, the expectation is that subsistence farmers will be most common in SSA and least common in LAC, while non-farming rural households and perhaps diversified rural households should be most common in LAC and least common in SSA. What is to be expected in the case of specialized farmers is less clear, except that they would not necessarily be most common in LAC, where greater non-farm opportunities may prompt households that might otherwise enter this group to move into more non-farm activities instead.

FIGURE 2.6, which shows the shares of rural youth living in each type of household, amply confirms these expectations. First, it shows that rural youth in transitioning rural households are the largest group, at 56 per cent overall, followed by those living in non-farming households, at nearly one quarter of the total. Very few young people live in households located in the corners of the household transformation space: only 2 per cent are in diversified rural households, 8 per cent in subsistence-farmer households and 10 per cent in specialized-farmer households. The low level of subsistence farming reflects the fact that the transformation of the AFS (the focus of chapter 6) that has been unfolding across the world over the past few decades has introduced market engagement into all but the most remote rural areas.

Second, rural youth living in subsistence farm households are more common in SSA, which is the least transformed region (twice as common as in APR and five times as common as in LAC, which is the most highly transformed region). This pattern is consistent with expectations. Third, rural youth in non-farming rural households are most common in LAC (two to three times more common than in the other two regions), also as expected. Slightly surprisingly, young people living in such households are more common in SSA than in APR, but the difference is not large.

Finally, the shares of rural youth in diversified and non-farming rural households become progressively larger as one moves across the ordered ROS categories, while the shares living in subsistence farm households become progressively smaller. These patterns are entirely consistent with the expectations laid out above.

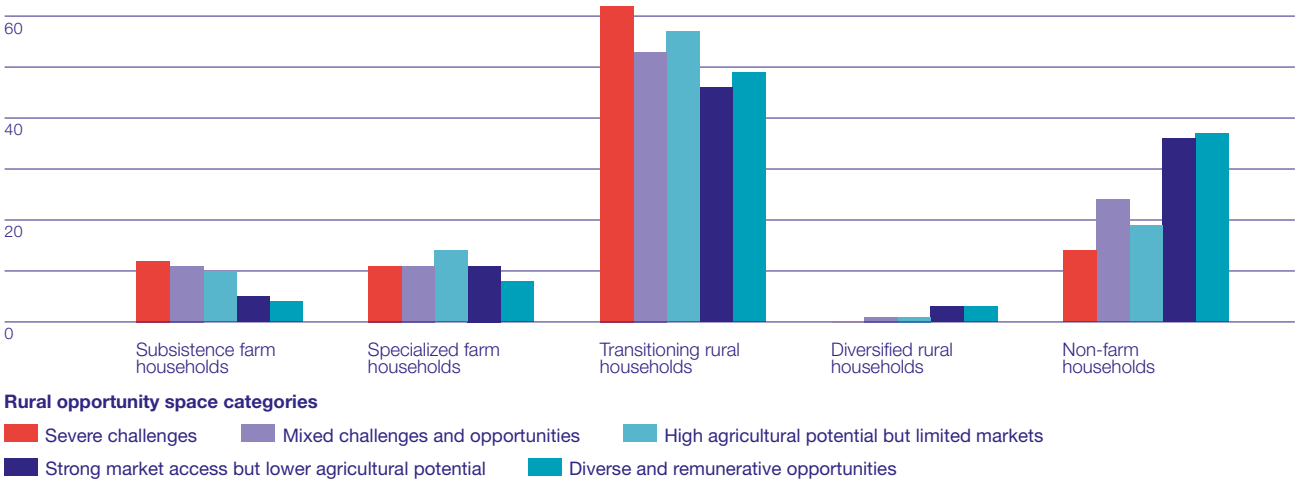
BOX 2.4 What are full-time equivalents (FTEs) and how are they calculated?

In this report, individuals' work effort is expressed in full-time equivalent units (FTEs). FTEs are estimates of the amount of time that an individual works relative to a standard benchmark (FTE = 1.0) of 40 hours per week, 52 weeks per year. Someone who is not in the workforce has an FTE of zero, while someone working an average of 20 hours per week over the course of the past year would have an FTE of 0.5.

The reference period for all work-related calculations in this report, including those dealing with the question as to whether someone was in the workforce or not or was unemployed, is the past 12 months. This approach is different from the one used in standard labour market analyses, which focus on the past week. The approach here will deliver higher estimates of workforce participation than standard labour market measures and will not measure unemployment, since that cannot be defined for a 12-month reference period. However, by taking advantage of the full 12-month period covered by the 12 household datasets, the report delivers a more complete picture of youth work effort than would be possible with more traditional approaches.

FIGURE 2.6.a Households engage with the economy based on the opportunities that their rural opportunity space offers

Households across the rural opportunity space, percentage by household type



Notes: The percentages of households within each category of the rural opportunity space add up to 100.

FIGURE 2.6.b The majority of rural youth live in either transitioning households (APR and SSA) or fully transformed non-farm households (LAC)

Share of rural youth within regions by household type

Notes: Household transformation categories are defined in parallel with the country transformation typology (i.e. structural and rural transformation) at the household level. These categories combine the extent to which the household has commercialized its agricultural production activities (measured as the share of farm sales over total farm income and reflecting the rural and agricultural transformation of the household) with the extent of its diversification into the non-farm economy (measured by the share of non-farm income over total income and reflecting its structural transformation). The household transformation categories are defined on the basis of the combination of the terciles for these two indicators. Subsistence farming households are in the bottom tercile of both indicators. Specialized farming households are among the top third in farm commercialization but the bottom third in non-farm diversification. Diversified rural households are among the top third in terms of both indicators. Transitioning households have mixed livelihood strategies and are moving out of subsistence agriculture in all directions. Non-farming households (those with no own-farm income) are split between landless farm households whose head performs agricultural wage labour (consistently the least desirable kind of employment in rural areas and an indicator of poverty) and fully transformed households whose members do other types of non-farm work.
Source: Authors' calculations using household survey data from 12 countries in 3 regions (SSA, APR and LAC) combined with population density data from the WorldPop project at the enumeration area level.

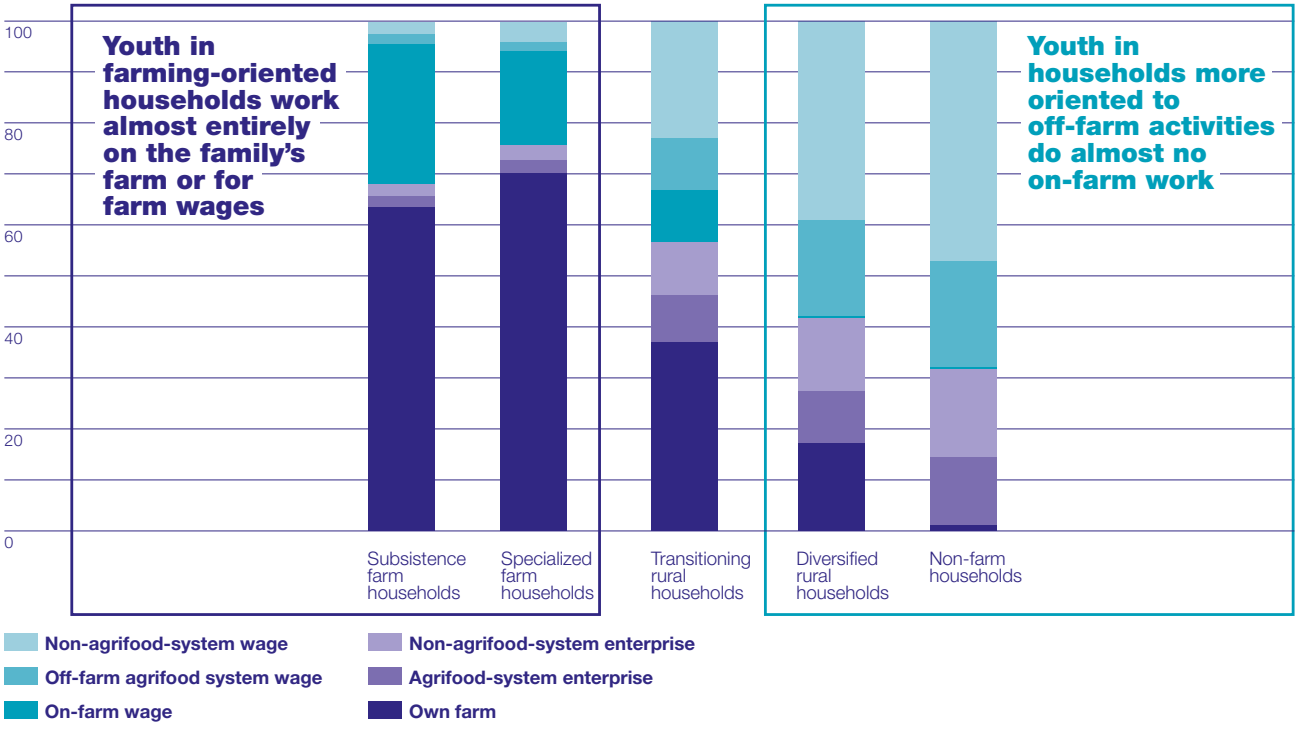
Sectorally, rural youth largely do what the other members of their households do; but when they work off the farm, young people are much more likely than their elders to have wage jobs

The basic pattern is one in which young people divide their time between on-farm and off-farm activities in very much the same way as their families do, but they diverge in clear ways when it comes to the kind of non-farm work that they do. In subsistence farm households, specialized farm households and transitioning households, rural youth devote most of their working time to their household's own farm and to farm wage work, while those residing in households that are less oriented towards farming (diversified rural households and fully transformed non-farming households) mainly work for wages off the farm (see **FIGURE 2.7**).

When young people work off the farm, they diverge in clear ways from the pattern established by the older members of their households (see **FIGURE 2.8**). Young people consistently engage to a much greater extent than their elders in off-farm wage work within the AFS and much less in any kind of enterprise work. These patterns point to a lower barrier to entry into off-farm wage work than into enterprise work and are in keeping with the finding in the literature that most successful entrepreneurs are not young but instead older people, who hire young people as wage workers (Mabiso and Benfica, 2018). Gender also exerts a strong influence on young people's choices about how to engage in the economy, as will be discussed in chapters 3 and 6.

FIGURE 2.7 What rural youth do depends, but only in part, on what the other members of their households do

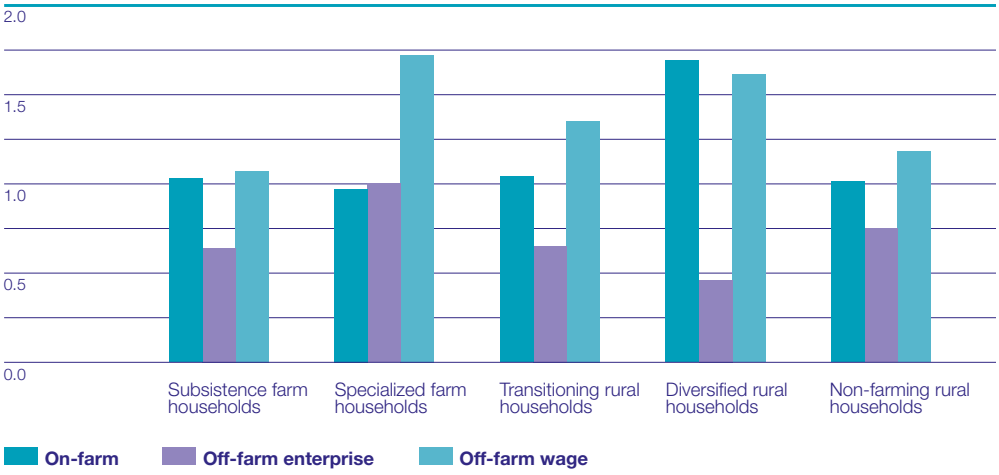
Distribution of rural youth work effort, by functional and sectoral employment categories, percentage of full-time equivalents



Notes: Full-time equivalents (FTEs) are based on household survey data covering 128,227 individuals representing around 134 million rural youth in 12 countries in 3 regions (SSA, APR and LAC). Indonesia was dropped from the FTE calculations because inconsistent survey weights interfered with comparability.
Source: Authors.

FIGURE 2.8 When they work off the farm, rural youth engage much more in wage work and much less in enterprise work than their elders

Ratio of FTE shares for rural youth relative to non-youth in the same households



Notes: Full-time equivalents (FTEs) are based on household survey data covering 128,227 individuals representing around 134 million rural youth in 12 countries in 3 regions (SSA, APR and LAC). Indonesia was dropped from the FTE calculations because inconsistent survey weights interfered with comparability.
Source: Authors.

Evidence suggests that commercial potential has far more of an impact than agricultural potential on rural youths' schooling and welfare outcomes

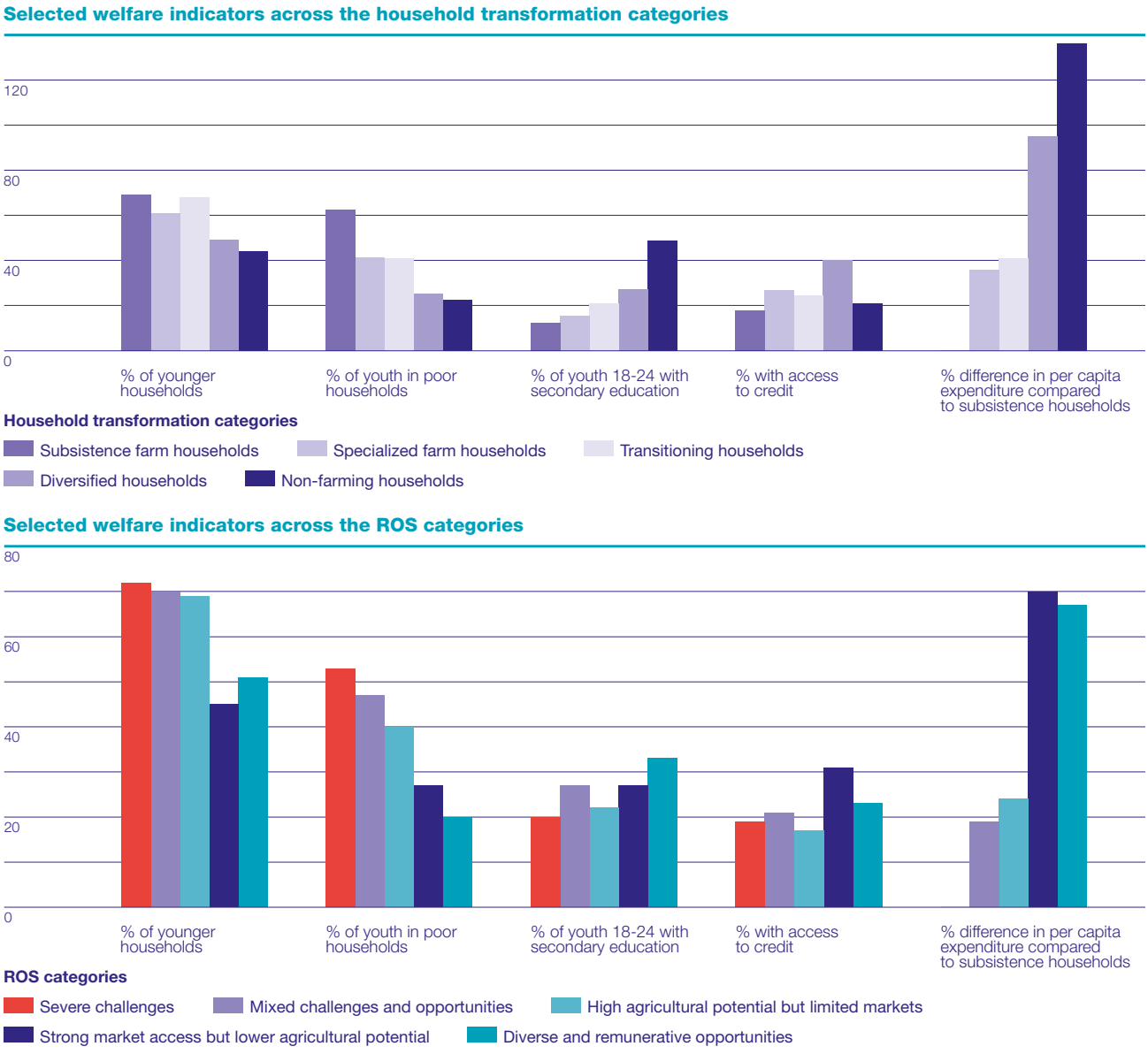
The line of reasoning outlined above regarding the role played by rural non-farm income in driving gains in overall income suggests that increases in total per capita household incomes should be expected to follow the same order in terms of ROS categories: SC, MX, HALM, SMLA and DO. Likewise, household incomes would be expected to rise in this same order: Subsistence farm households, specialized farm households, transitioning rural households, diversified rural households and non-farm rural households.

The data shown in **FIGURE 2.9** resoundingly confirm both of these expectations. The percentage of young people who are poor falls steadily across the ordered household and ROS categories, while the percentage with a secondary education and mean household income per capita rise steadily across both. Also across both sets, the percentage of younger households falls and the percentage with access to credit rises slightly. The pattern is clear: subject to the overall level of transformation of the country, a household's ROS strongly influences how it engages with the economy and this, in turn, drives income and welfare outcomes.

Yet the ROS combines two elements of opportunity: commercial potential and agricultural potential. Which of these has the larger impact on what youth and their households do and on their welfare outcomes? The rest of this section examines this question, starting with the impact of each of these elements on schooling.

As rural youth transition into adulthood, one important decision is how long to continue to pursue an education. This question is not separable from the questions of whether, how much and in which activity to work (Fox, 2018). Adolescents between the ages of 15 and 17 are generally expected to be in school, although they may also work while in school depending on the opportunities that their geographic setting offers and the needs of their households. The percentage of this cohort who are in school will slowly

FIGURE 2.9 Youth and household welfare measures across household transformation categories and ROS categories are closely in step with expectations and are driven by access to rural non-farm sources of income



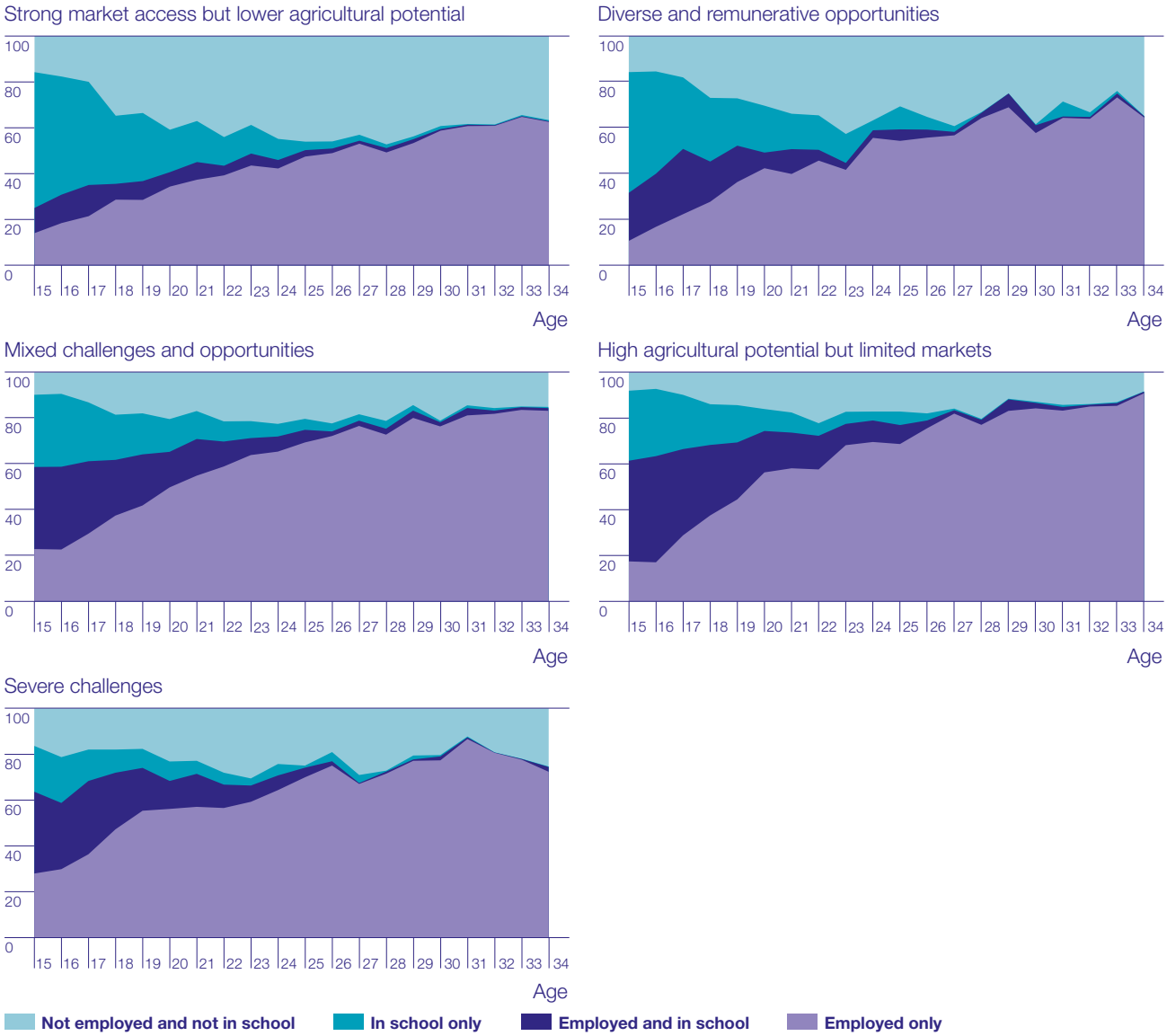
Source: Authors' calculations using household survey data covering 128,227 individuals representing around 134 million rural youth in 12 countries over 3 regions (SSA, APR and LAC).

decline as they transition into work after completing their secondary schooling. Where and how they work will be strongly influenced by the available opportunities.

The difference between the impacts of commercial potential and agricultural potential on schooling can be assessed in three ways based on the information provided in **FIGURE 2.10**. First, with a move, for example, from an MX space to an SMLA space – a move up one tercile in commercial potential while not changing the level of agricultural potential – the percentage of young people in school does not change (remaining around 70 per cent), but the percentage of young people who are in school only – devoting all

FIGURE 2.10 Commercial potential has a more positive impact than agricultural potential on the school-to-work transition

School-to-work transitions by ROS categories, percentage of youth by age



Notes: Due to issues with the questionnaire design, Bangladesh was dropped from the full sample for school-to-work transition figures.
Source: Authors' calculations based on 12 socio-economic household surveys conducted in LAC, SSA and Asia.

their time to school rather than juggling school and work – rises dramatically (from about 30 per cent to about 60 per cent). This can be expected, on average, to lead to better learning outcomes.

Second, a move, for example, from an MX space to an HALM space – a move up one tercile in agricultural potential without changing the level of commercial potential – generates no appreciable change in the school/work pattern: around 70 per cent of 15-year-olds remain in school and a majority of them continue to work while attending school (in sharp contrast to what occurs in the SMLA space).

Finally, with a move, for example, from an SMLA space to a DO space, the share of 15-year-olds who are in school remains around 70 per cent, but the percentage of those who are also working actually rises. Clearly, then, many more young people, in relative terms, in more densely populated areas (which have more commercial potential) will devote themselves entirely to their studies than young people in areas of high agricultural potential will.

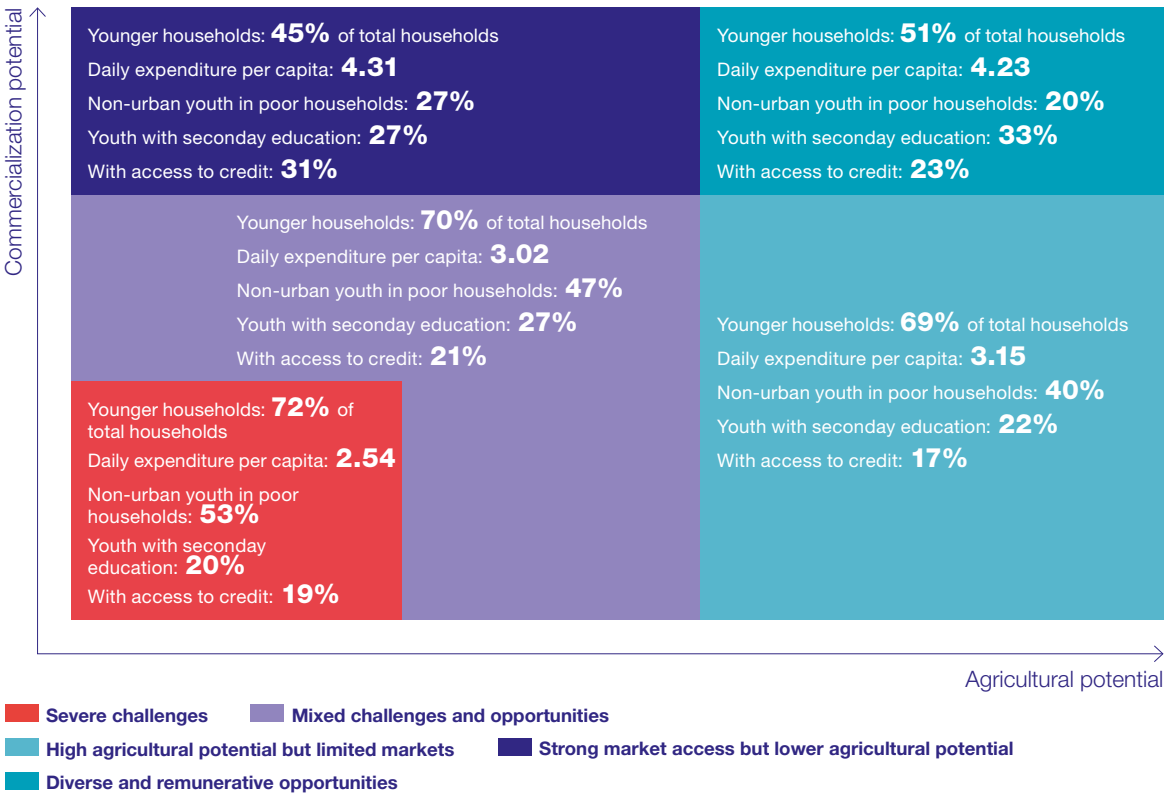
Welfare indicators follow the same pattern as schooling. This can be seen most clearly from the ROS map in **FIGURE 2.11** by considering the same three moves just discussed in relation to the school-to-work transition. Moving up one tercile in commercial potential from an MX space to an SMLA space delivers a nearly 40 per cent increase in average household income (measured by daily expenditure) per capita (from $3.02 to $4.31), a 40 percentage-point drop in the share of poor youth (from 47 per cent to 27 per cent), no change in the percentage of youth with secondary education and a nearly 50 per cent increase in the share of households with access to credit (from 21 per cent to 31 per cent).

If the move is instead up one tercile of agricultural potential from an MX space to an HALM space, incomes barely change at all, the share of poor youth falls by only about 15 per cent (from 47 per cent to 40 per cent), and the percentages of young people with a secondary education and of households with access to credit both fall.

Finally, a move from an SMLA space to a DO space (improving agricultural potential with no change in commercial potential) delivers mixed results: incomes

FIGURE 2.11 Income and wealth measures for households and youth rise more with increases in commercialization potential than with increases in agricultural potential

Income and wealth indicators by ROS



Notes: The sample includes only households with at least one young individual. Younger households are those in which young people make up a larger proportion of the household's economically active members than the national average.
Source: Authors' calculations based on 13 socio-economic household surveys conducted in LAC, SSA and Asia.

fall very slightly, youth poverty is reduced by about 35 per cent (from 27 per cent to 20 per cent) and the share of young people with a secondary education rises by about 25 per cent (from 27 per cent to 33 per cent), but the share of households with access to credit declines.

While not analytically conclusive, these results suggest that, across a broad range of indicators, commercial potential (as proxied by population density) has much larger positive effects on the welfare of families and the young people in them than agricultural potential does. This finding is not new. In fact, it is consistent with a large body of work on economies of agglomeration (World Bank, 2009; Spence, Annez and Buckley, 2009), but it nonetheless has important policy implications that need to be borne in mind when thinking about how to help young people become more productive, more connected and in charge of their own futures.

Investing in rural youth requires a careful assessment of where rural youth live in terms of the opportunities open to them and the challenges they face and the households they live in.

First, diversification is the norm. Only 12 per cent of rural youth live in subsistence farm households even in SC spaces – barely more than the share living in specialized farm households. Even in SSA, only 10 per cent of rural youth live in such households.

Second, for most rural households, diversification into the non-farm economy is likely to follow a path leading towards specialization in non-farm activities. The predominance of non-farmers in LAC, the fact that 20 per cent of rural youth, even in SSA, live in such households and the sharp rise in the percentage of young people who are living in such households across the sequenced ROS categories all point in this direction. So does the fact that less than 3 per cent of rural youth (regardless of their ROS, region or the level of structural and rural transformation of their environments) live in diversified rural households. Finally, the overwhelming evidence on the welfare-enhancing effects, across the developing world, of rural non-farm income (Haggblade, Hazell and Reardon, 2007) also leads to the same conclusion.

Third, despite the very evident move towards rural non-farm engagement across the developing world, farming is and will remain extremely important for millions of rural youth for many years to come. With the exception of LAC, at least 80 per cent of rural youth live in households where farming makes a major contribution to their livelihoods. Especially in Africa, the predominance of rural youth living in HALM spaces – where a great deal of agricultural potential goes largely unrealized because of poor market connections – suggests that the returns to higher agricultural productivity could be very significant in the short run.

Fourth, the problem posed by marginal areas appears to be manageable. Except in the most highly transformed countries, less than 3 per cent of rural youth live in SC spaces, and even in those spaces, nearly 90 per cent of the young people do *not* live in subsistence farm households but rather in households that are engaging actively in both the farm and non-farm economies. As rural population densities continue to rise, as physical infrastructure continues to be extended into marginal areas and as mobile connectivity gains ground, market engagement will grow in these areas and welfare should increase. In the most highly transformed countries, where nearly 1 out of every 10 rural youth lives in SC spaces, the primary challenge is one of political will, in conjunction, in some cases, with overcoming ethnic divisions.

In view of this state of affairs, a balanced policy is needed. Investments to improve productivity in farming will continue to be important, especially in areas with

high degrees of agricultural potential. The relatively large share of young people living in specialized farm households in the three Asian countries analysed here – around 15 per cent – shows how important this can be. Yet policymakers must realize that, as these investments improve incomes, many rural youth will be looking for opportunities to move into the non-farm economy. This highlights the need to integrate investments aimed at improving the connectivity of specialized farm households where rural youth live and broad-spectrum development investments in order to improve welfare outcomes. While agroecological potential is harder to influence (and takes longer to yield positive returns and hence is less politically attractive), commercial potential can be improved by investing in infrastructure and in providing greater access to markets and information. In areas with less agricultural potential, this approach can also raise the pay-offs to interventions targeting agricultural technologies that can improve resilience and productivity under more difficult conditions. Good rural development policies are thus a prerequisite for broadening the range of diverse, remunerative opportunities for rural youth.

SPOTLIGHT Rural youth in conflict-affected and fragile situations

Rural youth living in conflict-affected or fragile settings have fewer opportunities. The increasing prevalence of conflict, inequality, forced displacement, natural disasters and other global trends of the sort is heightening the severity of the challenges and constraints faced by rural youth (see chapter 1). This makes it critically important to tailor youth-centred development interventions to the targeted setting. **In 2016 alone, the conservative estimate is that at least 350 million rural youth lived in conflict-affected countries, and almost one third of the world's rural youth experienced conflict directly (Baliki et al., 2018).**[15] Based on the World Bank's Harmonized List of Fragile Situations, approximately 50 million non-urban youth from low- and middle-income countries currently live in fragile situations marked by the absence of institutions or the presence of extremely weak ones and by a weak State unable to provide adequate services in such areas as security, welfare and justice.[16]

Conflict and fragility may reduce both the quality and quantity of available jobs and individuals' capacity to efficiently do those jobs. This, in turn, can undermine the political, social and economic inclusion of rural youth, potentially fuelling further instability. Young people in fragile and conflict-affected areas are less likely to have attended or completed primary school and are therefore effectively excluded from secondary education. At the same time, keeping youth in school becomes increasingly important given the more formidable challenges they will face in the labour market. Recent evidence suggests that there may also be gendered effects, with girls being more likely to leave school than boys in these situations. What complicates matters even more is the fact that the lack of adequate non-cognitive skills can be exacerbated by the trauma of experiencing violence.

Furthermore, conflict and fragility potentially widen the aspirational and skills gaps existing between rural youth and other young people. The presence of these gaps is particularly worrisome in conflict-affected and fragile rural settings, where the opportunity space for rural youth is already more limited. On the one hand, conflict leads to the destruction of physical capital and reductions in investment and entrepreneurship. As a result, the economy may not demand the skills that young people have acquired and may not produce the jobs that they may desire (Rebosio et al., 2013). This fosters an environment marked by unmet expectations which may potentially lead to increased perceptions of exclusion and marginalization that may, in turn, heighten the risk of conflict and violence (OECD, 2018).

Conflict and fragility may also reverse the direction of the transformation process in the AFS (causing it to move from a transitional stage back to a traditional model) by disconnecting rural areas from value chains and markets and reducing employment opportunities for rural youth. The expropriation of land and the reduction of already limited access to land can lead to a further deterioration in the opportunities for rural youth in conflict areas, oftentimes resulting in displacement and permanent migration to urban areas. Yet young people and properly functioning agricultural systems are needed to strengthen food security and remedy the impacts of conflict and fragility (Baliki et al., 2018).

Conflict and fragility influence the labour market participation rates of men and women differently. Interestingly, studies report mixed findings depending on the nature and context of the conflict in question. In fragile and conflict situations, young women are oftentimes withdrawn from education and prevented from working outside of the house because their families fear for their safety. In addition, as reported by Schindler and Brück (2011), fertility rates among young women increase as households attempt to replace lost children. This may further depress the already low labour force participation rates of young rural women (see chapter 3). Though some studies suggest that displaced rural women are more likely than displaced rural men to find work in urban labour markets, this is the result of a necessary, but temporary, situation that does not lead to long-term changes in traditional gender roles and perceptions (Calderón, 2011).

Integrated and holistic policy approaches are needed to increase the social, economic and political inclusion of rural youth in fragile and post-conflict situations and to disrupt the vicious cycle of fragility and conflict. Multisectoral programmes should seek to simultaneously enhance the social integration, economic productivity and political participation of rural youth to support them in becoming productive and well-connected individuals in charge of their own future (DIIS, 2008). Important objectives for programme interventions include:

+ *Re-establish connections to markets and urban areas:* Governments, policymakers and development agencies

15 These authors matched up data from the Uppsala Conflict Data Programme / Peace Research Institute Oslo Armed Conflict Database with World Bank population estimates.

16 Calculated based on the rural-urban gradient using WorldPop population density data from 85 low and middle income countries.

need to make infrastructure investments to re-establish links with value chains, to strengthen food security and to create opportunities in the rural AFS that will be attractive for rural youth in post-conflict settings. Promoting innovative approaches involving, for example, the use of digital resources and mobile training facilities can help to improve connectivity, productivity and agency (UNCDF, 2018).

- *Promote education and skills development:* Redeveloping education systems and providing (vocational) training in fragile situations is crucial in order to equip rural youth with the cognitive and non-cognitive skills needed to succeed in rapidly changing labour markets. However, concentrating entirely on supply-side actions is not a sufficient response; demand-side concerns such as expectations and gender issues also need to be addressed (Baliki et al., 2018). The development of non-cognitive skills should be included in school and training curricula, since they are good predictors of long-run economic performance and entrepreneurial success and can help to reduce criminal activity. In addition, psychosocial support for youth is crucial, especially in post-conflict settings in which young people have experienced violence, in order to support the acquisition of cognitive and non-cognitive skills.
- *Promote youth agency and empowerment:* A youth-centred approach needs to be applied in development programmes and local conflict resolution interventions. Service delivery systems should seek to make people partners in the design and delivery of public services in fragile and post-conflict situations by mainstreaming participatory and consultative elements for all planning and programming functions (see chapter 4).
- *Improve land tenure systems:* To empower rural youth and provide attractive and sustainable opportunities in farming, functioning land tenure markets need to be established. These markets need to be coupled with access to finance, information and training for rural youth in order to ensure their productive engagement with the economy and society.
- *Address capital constraints:* In-kind capital assets and subsidized credit are needed in fragile and post-conflict situations, especially those in rural areas, in order to help young people to start up and maintain their businesses and to improve their long-term earning potential (Blattman and Ralson, 2015). A recent study in post-conflict Uganda showed that, although the provision of start-up grants to young adults had increased their earnings by 38 per cent after four years, these effects faded and ultimately disappeared in the long term. The effects on assets and skilled work were sustained, however. This suggests that long-run opportunities can be expanded for rural youth by initiatives of this sort (Blattman, Fiala and Martinez, 2014 and 2018).

BOX 2.5 Skills development in Nepal's post-conflict setting

To respond to political and social imbalances and provide young, conflict-affected men and women between the ages of 16 and 35 with the skills and knowledge needed to respond to the increasing challenges associated with labour market demands, IFAD partnered with the International Labour Organization's country office in Nepal (ILO Nepal) to provide training to young people and to place them in sustained economic activities. The overall implementation approach of the Skills Enhancement for Employment Project (SEEP) was primarily based on the ILO Training for Rural Economic Empowerment (TREE) methodology, which builds on the principles of community-based training. TREE consists of a set of distinct but coherently linked components for guiding the process of economic development. Starting with institutional arrangements and planning among partner organizations at the national and local levels, these components are focused on systematically identifying employment and income-generating opportunities at the community/local level; designing and delivering appropriate training programmes; and providing the necessary post-training support services, including a range of support measures to assist targeted beneficiaries to organize themselves into credit and savings groups.

By the time of its completion in 2010, the programme had promoted income generation and local economic development for youth in the five targeted districts of western Nepal:

- **Altogether, 1,252 young people enrolled in 39 different capacity development and vocational training programmes; 96 per cent of them graduated.**
- **Thanks to post-training support services, 70 per cent were placed in employment.**
- **To enhance entrepreneurship skills, about 250 programme beneficiaries interested in starting their own businesses were provided with entrepreneurship and enterprise development training.**
- **Cooperative enterprises run by trained youth were in place and functioning well. Some 150 trained young people were organized into cooperatives.**
- **Technical training providers, NGOs and other stakeholders had all engaged in capacity-building activities.**

SPOTLIGHT Near East, North Africa, Europe and Central Asia (NEN)

The youth bulge in NEN represents an opportunity that is not being fully tapped owing to high youth unemployment rates. Countries in the NEN region have a large percentage of young people in their populations; almost one out of every five people is young, and they account for 7 per cent of the total rural youth population in low- and middle-income countries. The NEN region comprises two distinct subregions:[17] the Near East and North Africa (NENA) and Central and Eastern Europe and newly independent States (CEN). Within these two subregions, NENA once had the largest share of young people in its population but has recently been surpassed in that respect by sub-Saharan Africa. This "youth bulge" represents a window of opportunity.

However, the NEN region also has one of the highest youth unemployment rates in the world (around 30 per cent in 2016). The highest rates of all are 54 per cent in Bosnia and Herzegovina (2016), 43 per cent in the State of Palestine (2017) and 36 per cent in Armenia (2016) (ILOStat, 2018). Youth unemployment rates are generally higher in urban areas and, in some cases, are as much as 2.5 times higher than the corresponding adult unemployment rates (ILO, 2017). The possibility of becoming unemployed is especially high when people are transitioning from school to work, and this is particularly true in this region because its education systems are failing to provide youth with the cognitive and non-cognitive skills they need to succeed in the labour market (Salehi-Isfahani, 2012; Assaad et al., 2017). Therefore, even though access to education is nearly universal in the region, 34.1 per cent of young men and 25 per cent of young women are leaving school early.[18] Survey results indicate that, in Egypt, nearly two thirds of unemployed youth were looking for work for one year or longer (classified as long-term unemployed). In Lebanon, 46.5 per cent of unemployed youth had been unemployed for longer than one year (25.3 per cent longer than two years) (ILO, 2016). In the CEN[19] subregion, 38 per cent of young jobless persons in Armenia were classified as long-term unemployed and, in Azerbaijan, the corresponding figure was 72 per cent (ILO, 2017).

The rural youth labour market is marked by an inefficient allocation of labour, especially in the case of young women. A large share of total employment is still in agriculture in most NEN countries. In CEN, although unemployment is higher in rural areas (19.7 per cent) than in urban areas (9.5 per cent), young people are overrepresented in agriculture, followed by retail trade and hotels and restaurants. The proportion of contributing family workers is also high, especially in Armenia, Azerbaijan, Georgia and Kyrgyzstan. The vast majority of own-account workers and contributing family workers are engaged in low-productivity activities, often without any social protection. In the NENA subregion, unemployment in rural areas is lower (22.8 per cent) than in urban areas (29.3 per cent), but more than half of all working young people are employed in the service sector, especially in wholesale and retail trade, and in manufacturing. Service-sector employment is as high as 82.1 per cent in the case of Jordan (ILO, 2016). However, both subregions face the same problem of skill mismatches. The economies of these countries are not able to generate enough productive jobs for young, educated people, and many of these people therefore find themselves performing jobs that require less education than they possess. The lack of jobs in productive private sector activities is therefore a big demand-side challenge for young people in NEN. Indeed, the contribution of private sector investment to economic growth in this region is the lowest in the world, and most investments are directed towards capital-intensive and low-skilled-labour-intensive sectors (Gatti et al., 2013). Interventions for addressing this demand-side problem should include improvements in vocational training that link it more directly to the labour market and increased use of on-the-job training programmes for young people while they are still in school.

Access to suitable job opportunities is particularly limited for young women in the region. In fact, the labour force participation rates of young women in the NENA subregion are by far the lowest in the world at 15 per cent, as compared to 35 per cent worldwide (ILO, 2017). The situation is better in the CEN countries, where the labour force participation rate for young women is around 30 per cent. Unemployment rates are higher among young women, in some cases nearly twice as high, as they are among young men. Conservative social attitudes regarding such practices as early marriage, coupled with traditional cultural norms and gender stereotypes, undermine women's educational

17 Based on the IFAD classification of regions.

18 The NENA region as defined by ILO includes one other country – Bahrain – but does not include Algeria, Djibouti, Libya, Morocco, Somalia, Sudan, Israel, Eritrea, Tunisia or Turkey.

19 The CEN region as defined by ILO includes two other countries – Serbia and Ukraine – but does not include Croatia, Cyprus, Georgia, Malta or Montenegro.

and employment prospects and limit the types of work that they are allowed to do. In some NEN countries, young women tend to choose types of careers that are reserved almost exclusively for them in such areas as caregiving, education and health services. Such restricted opportunities undermine young women's potential and curtail their future prospects by excluding them from better-paying jobs in male-dominated professions (UNDP, 2016).

Ongoing conflicts and political instability have especially harsh effects on rural youth. These young people tend to become marginalized, thereby increasing the level of migration pressure.

The effects of the conflicts existing throughout the NEN region continue to reverberate, affecting both conflict countries and their neighbours. The Syrian conflict has led to the migration of over 5 million Syrians and displaced another 7 million internally (Kabbani, 2019). While fighting in large urban centres such as Aleppo have captured headlines, much of the conflict, devastation and displacement has occurred in rural areas of the country. The civil war in Yemen has displaced over 3 million people. Yemen is a mainly rural country, and the conflict has disrupted the livelihoods of most of the population. The disruption caused by conflicts just when young people are transitioning towards social and economic independence has long-lasting implications.

Apart from the negative impacts of conflicts, many countries of the region are led by authoritarian regimes that tend to marginalize rural areas and youth. Investments tend to flow to areas that are aligned with the regimes and their political bases, which are concentrated in the capital cities and other urban areas. As a result, rural areas are particularly susceptible to economic, social and political exclusion and to the marginalization of "outsider" groups, including women, youth and migrant workers. Youth in NEN have struggled to fulfil their aspirations in relation to economic, civic and political participation. Rural youth are even more disadvantaged, as they have limited access to public institutions and are subject to greater constraints when they attempt to start their own initiatives. Labour force participation rates are lower in rural areas in most NEN countries; for example, that rate is just 2 per cent in Egypt for people between the ages of 15 and 24 in rural areas, in contrast with a rate of 13 per cent in urban areas, while, in the State of Palestine, the difference between urban and rural youth participation rates amounts to 18.6 percentage points (Kabbani, 2018).

In the absence of viable pathways to means of supporting themselves socially and economically, young people are forced to migrate in search of better opportunities. However, when they do so, they have to deal with discrimination and marginalization in the host country. Refugees are often seen as new competitors by local workers, with the consequent rise of social tensions and instability. This limits their chances of finding a job that is commensurate with their skills. However, migrant labour can hold great potential for the economy of receiving countries. In particular, in the Mediterranean basin, it may be of help in dealing with the challenges Western Europe will face as its labour force shrinks. Effectively managed interregional migration can benefit both receiving and sending countries: for receiving countries, it can ease the negative consequences of having an ageing population by rejuvenating their labour force and lowering their dependency ratios; and, for sending countries, it can decrease the current youth bulge in their population pyramids and ease the pressure on their labour markets (Koettl, 2009). To make this possible, policy reformulations are needed in order to expand the opportunity space for refugees and migrant workers and to promote their economic participation by aligning underserved occupations with their skills.

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