5
Rural Youth and Employment in Ethiopia

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5.1 Introduction

The economic growth literature argues that as an economy grows, the location and structure of labour transitions from primarily rural, agriculture-focused activities to more urbanized activities in the industry and service sectors. This structural transformation improves the livelihood of those who earn higher wages outside of agriculture, as well as increases land to labour ratios of those who remain in agriculture. Increases in household income (via diversified labour portfolios) often provide capital to spur innovation and agricultural productivity growth in rural areas. Over the last few decades, Ethiopia's economic development strategy, the Agricultural Development Led Industrialization (ADLI) strategy, aimed to increase agricultural productivity, and in doing so, encouraged labour diversification via the development of rural nonfarm activities. This mode of development is supported by a large body of research literature which suggests that growth in the rural nonfarm sector is driven by agricultural productivity growth (Haggblade, Hazell, and Reardon 2002, Haggblade, Hazell, and Dorosh 2006, Mellor 1976).

Given Ethiopia's focus on ADLI, agricultural production has increased substantially and the country has experienced impressive economic growth over the last decade of approximately 11 per cent per year. However, macroeconomic trends suggest that Ethiopia's economy remains at a very early stage in its structural transformation. A puzzle presents itself as to how such growth can be maintained given that Ethiopia is one of the least urbanized countries in Africa south of the Sahara (84 per cent of the total population lives in rural areas) with approximately three quarters of the population engaged in agricultural activities (FDRE Population Census Commission 2008, Central Statistical Agency 2013). From a policy point of view, understanding how youth can take advantage of employment opportunities, both in the agriculture and non-agriculture sectors, will inform future economic growth potential in years to come.

Slow urbanization paired with vibrant economic growth suggests that rural youth will remain an important component of the agricultural labour force, while

Emily Schmidt and Firew Bekele Woldeyes, *Rural Youth and Employment in Ethiopia* In: *Youth and Jobs in Rural Africa: Beyond Stylized Facts*. Edited by: Valerie Mueller and James Thurlow, Oxford University Press (2019).

DOI: 10.1093/oso/9780198848059.003.0005

also seeking to diversify into non-agricultural, higher-value labour opportunities. Within the agricultural sector, transformation includes moving from low-value cereal production, which is characteristic of current Ethiopian agricultural production patterns, to high-value crops, such as fruit and vegetables. Rural youth may seek to modernize agricultural practices and utilize new technologies to enhance agricultural growth in the medium term. Regarding the overall economic landscape, as structural transformation progresses in Ethiopia, youth may drive labour diversification trends from predominantly rural agricultural activities to more urban focused manufacturing and service sector activities.

This chapter examines current trends in labour diversification in Ethiopia, focusing on youth employment activities, and explores the structure of livelihood decisions given underlying agricultural endowments. Although the majority of rural youth work exclusively on their own family farm, it is not clear that focusing on agriculture is a strategy that will provide a sufficient livelihood for future generations. Recent data collected by the Ethiopia Socioeconomic Survey (ESS) suggest that youth in particular may have less access to important agricultural assets than do their elders. In response to these constraints, one might expect youth to implement more intensive farming. However, the same data show that households headed by youth are not more likely to use agricultural production enhancing technologies than are mature-headed farming households.

Given that youth face constraints in the agricultural sector, we examine youth nonfarm labour engagement in rural and small town areas. We find that youth (those aged 25 to 34 years) have a greater probability of working in nonfarm enterprises (NFE) compared to mature individuals (ages 35–64). The majority of individuals working in nonfarm employment are engaged in small-scale trade activities, such as street and market vending, while there exists limited demand for more skilled labour in the construction and manufacturing sectors. Our analysis suggests that push factors are at play with regards to nonfarm diversification, whereby those that live in areas with less favourable agricultural potential, who possess few assets, like livestock, and have less access to agricultural credit are more likely to seek off-farm work.

This chapter provides evidence that youth are currently driving the limited structural changes observed in employment patterns in Ethiopia's economy via employment diversification into nonfarm enterprises. However, low demand for higher-skilled labour, including in the rural nonfarm sector, remains a major obstacle to achieving structural transformation in the near to medium term. The remainder of the chapter is organized as follows: the second section reports employment trends in Ethiopia with a focus on youth activities in rural, small town, and urban areas. The third explores the difference in agricultural production practices between mature-headed households and youth-headed households. The fourth section focuses on youth nonfarm activities using a multinomial logit

model to explore correlates of youth decisions to work in the nonfarm sector. The fifth discusses results of the multinomial logit, and then the chapter concludes.

5.2 Employment in Ethiopia

5.2.1 Employment Trends

We utilize two nationally representative survey datasets to explore overall labour activity in Ethiopia: the National Labour Force Surveys (NLFS) of Ethiopia and the Ethiopia Socioeconomic Survey (ESS). Although the NLFS data provide nationally representative data on labour trends in the country, it restricts data collection to 'main occupation'. Thus, we are unable to assess the portfolio of economic activities individuals pursue, in particular rural nonfarm work by members of farming households. In order to provide a more comprehensive analysis of labour participation, we complement the NLFS evaluation with a detailed labour decomposition in rural, small town, and large cities using the ESS. The ESS requests that each individual household records the amount of time worked on agriculture (own-farm), wage, and nonfarm enterprises over a 12-month period. Given that 82 per cent of Ethiopia's population reside in rural areas, where a majority of individuals define their primary occupation as agriculture, the ESS supports a more diversified analysis of individual work portfolios.

5.2.2 National Labour Force Surveys, 2005 and 2013

When analysing the NLFS data, we adopt the Central Statistical Agency (CSA) definition of the active labour force. Labour force participants include individuals who are at least 10 years old (Ethiopia does not limit the labour force to retirement at 64 years old). Within the working age population, individuals who are not engaged in work and would not be available to take up work if it was offered, as well as individuals who are students, handicapped, or have long-term illnesses, are not considered a part of the active labour force.[1]

Although we follow CSA definitions for active labour force, we adjust the 2013 definition of economically active to provide a more accurate comparison with the 2005 NLFS data. In 2005, data collected on occupation and industry concentrated on individuals who worked at least four hours per day, while in 2013, individuals

[1] The CSA does not include 'seeking work' as a criterion for being considered economically active. This is due to local conditions of inadequate labour absorption, a large share of labour force being self-employed, and inconsistencies in time accounting of individuals who work in the informal labour market.

who reported working at least one hour were provided an industry classification. This modification in the questionnaire resulted in a large share of household unpaid family labour (firewood and water collectors) being classified as working in the household services sector in 2013. We adjust for this discrepancy by reclassifying individuals who stated their main occupation as 'wood and water collection' into 'not in the labour force' in order to provide comparable estimates of employment shares within sectors between the two survey years. We report labour shares using NLFS 2013 official definitions (including wood and water collectors in the economically active population) as well as our adjusted 2013 statistics.[2]

Between 2005 and 2013, while official definitions suggest a greater transition out of agriculture from 80 to 73 per cent of economically active population, we find that, after adjusting the data for water and firewood collectors, the share of people working in agriculture decreased by only 3 percentage points from 80 to 77 per cent over this period (Table 5.1). Overall employment shares in the services sector also reflect the reallocation of water and firewood collectors. Official statistics reported the overall services sector to encompass 20 per cent of the economically active population in 2013, of which private household work increased from 6 to 36 per cent of service employment. Adjusting for the discrepancies between the 2005 and 2013 surveys in the definition of those employed, we find that the service sector employed 16 per cent of the economically active population in 2013. Finally, the industry sector has not experienced significant growth over the last decade in terms of job creation, with employment shares increasing by only about one percentage point between 2005 and 2013.

Although the government of Ethiopia has made significant investments in education with an emphasis on increasing access to secondary education

Table 5.1. Employment shares by industry of the economically active population (ages 10 years and older), per cent

Industry	2005	2013 unadjusted	2013 adjusted
Agriculture	80.2	72.7	76.6
Industry	6.7	7.3	7.7
Services	13.2	20.0	15.7
Private households	6.0	36.4	10.2

Source: National Labour Force Survey (2005, 2013). '2013 unadjusted' represents the national CSA-based definition of sectors. '2013 adjusted' reclassifies water and firewood collectors as 'not economically active'—this sort of work is not taken into account in the figures in this column.

[2] In 2013, 88 per cent of individuals who reported water and wood collecting as their primary occupation reported that this activity was classified as unpaid family worker. The majority of these workers were female (89 per cent) and rural (94 per cent). This category was not present or accounted for in 2005. For more information on these individuals see Appendix 5.A1.

Table 5.2. Share of non-agricultural employment in Ethiopia by occupational group, 2013, present

Occupational group	Share of non-agricultural employment
Sales workers	30.2
Street and market salespersons	*43.6*
Shop salespersons	*22.1*
Alcohol sales	*20.6*
Other sales	*13.7*
Construction and mining	10.6
Food processing, wood and garment craft	7.6
Refuse workers	7.0
Teacher	6.5
Personal service worker	5.9
Other	32.2

Source: National Labour Force Survey (2013).

opportunities, non-agricultural workers are predominantly engaged in low-skill sectors. Sales workers make up 29 per cent of non-agricultural work, of which street and local market vendors comprise 42 per cent (Table 5.2). Formal shopkeepers and informal home-brewed alcohol sellers comprise almost equivalent shares of 22 and 21 per cent of sales workers, respectively. These employment trends suggest a mode of development that is moving, albeit slowly, towards a service sector focused economy. However, the specific service activities that individuals are engaged in reflect a low level of development with limited labour demand.

In order to better understand employment activities within the Ethiopian economy, we disaggregate employment numbers by geographic area (rural, small town, and urban areas) and by age group. Focusing on youth, the data suggest that rural youth are primarily engaged in agriculture, while a greater share of youth living in 'other urban' locations and in large cities are engaged in non-agricultural work. As per the CSA definition of 'other urban', we can assume that these centres represent secondary cities that are urban centres with populations of less than 100,000 people and are not considered regional capitals. When comparing the percentage share of individuals working in agriculture between rural areas and these secondary cities, diversification is primarily occurring in the secondary cities whereby 22 and 12 per cent of youth aged 15 to 24 years and 25 to 34 years, respectively, report their primary occupation is in agriculture (Table 5.3). However, it is important to note that 'other urban' represents only 12 per cent of the economically active population, both overall and for youth.

Evaluating employment transitions between 2005 and 2013 disaggregated by age and spatial domain, the NLFS results presented in Table 5.3 suggest very little

Table 5.3. Per cent of employed population whose primary occupation is in agriculture, 2005 and 2013, by age cohort and spatial domain

Spatial domain	Age 10–14	Age 15–24	Age 25–34	Age over 35	Total
Ethiopia					
2005	92.0	77.6	74.8	80.7	80.2
2013*	93.4	75.4	66.3	77.3	76.6
Rural					
2005	94.2	85.8	85.6	89.7	88.5
2013*	95.3	86.9	83.9	90.1	88.9
Other urban[1]					
2005	48.5	21.6	11.5	18.5	19.9
2013*	54.1	19.1	14.5	23.0	21.0
Major urban[2]					
2005	17.9	3.6	2.1	4.3	3.8
2013*	22.9	3.6	2.5	5.4	4.2

Notes: * 2013 data are based on reclassification of individuals that reported their primary occupation as 'wood and water collectors' into 'not in the labour force'.
[1] Other urban centres are urban centres with populations of less than 100,000 people in 2007 and which are not considered regional capitals.
[2] Major urban centres include all regional capitals and the 15 other major urban centres that had a population size of 100,000 or more in 2007.

Source: Ethiopia National Labour Force Surveys (2005, 2013).

movement out of agriculture. Almost equivalent shares of youth aged 15–24 and youth aged 25–34 worked in agriculture in 2013 as there were in 2005. The share of youth working in agriculture in secondary cities shifted slightly down by 3 percentage points (from 22 to 19 per cent) for those aged 15–24. However, individuals in secondary cities aged 25–34 and over 35 years experienced slight increases in the overall share of the economically active engaged in agriculture. As expected, individuals living in major urban cities, who represent 10 per cent of the economically active population, predominantly work in the non-agriculture sector. Given that the NLFS restricts data collection to the main occupation of individuals, we now turn to the ESS, which comprises a comprehensive account of time spent on specific activities in order to evaluate the portfolio of rural youth activities.

5.2.3 Ethiopia Socioeconomic Survey

The Ethiopia Socioeconomic Survey (ESS) 2013/14 was implemented in 433 enumeration areas and comprises 5,262 sample households.[3] Sampling of rural, small town (population with less than 10,000 people) and urban areas

[3] ESS began as the Ethiopia Rural Socioeconomic Survey (ERSS) in 2011/12. The first wave of data collected in 2011/12 included only rural and small town areas. The 2013/14 ESS (wave 2), which we use in this chapter, was expanded to include all urban areas.

(greater than 10,000 people) was implemented to allow representative sampling of the population in order to estimate regional and national level data.[4]

The ESS requested information on the amount of time worked on specific activities for each individual in the household. The post-planting and post-harvesting modules of the questionnaire recorded the activity and number of hours, days, and weeks enumerated individuals worked on the household farm during the last 12 months. Similarly, the time use and labour module recorded the occupation and industry of wage employment of the respondent, as well as the number of days and weeks worked during the last 12 months for primary and secondary occupations. Finally, a nonfarm enterprise module asked the household to report any nonfarm enterprise that was operating in the last 12 months, its primary activity, the number of months (and days in the month) that the enterprise was active, and finally the household members that worked in the nonfarm enterprise. We use data from these four modules to create a portfolio of individuals' labour activities based on time worked in a specific sector.

Based on the ESS data, Ethiopia comprises 93.5 million people, of which 51 per cent are aged between 15 and 64 years (inclusive). Within this age group, approximately 76 per cent (36.4 million) reported that they worked on their own farm, for wages, or within a nonfarm enterprise. Of this working population, the majority of individuals (78 per cent) are engaged solely in own-family farm activities, while only 12 per cent report having a secondary job outside of their own farm. Similar results were found by Bachewe et al. (2016) using a large-scale household survey dataset in high potential agricultural areas (Agricultural Growth Programme survey). They report that total off-farm income comprised 18 per cent of total rural income. Although the ESS data are instructive in understanding labour portfolios, they do not allow an accurate estimation of unemployment. Rather, the 'not working' population are those who do not report working in any labour activity and are not currently students. Under these definitions, approximately 19 per cent of the working age population is not working.[5]

5.2.4 Labour Diversification Can Be Viewed from Two Levels

At the household level, diversification is used as a way to augment overall income and/or increase income during the slack agricultural season. Given that Ethiopia is characterized by rainfed agriculture, households may also diversify their income to smooth consumption when the household is faced with exogenous shocks. At the individual level, there is a division of labour within the household of who is asked to diversify. For example, some members of the household may be

[4] Regional strata include: Addis Ababa; Amhara; Oromiya; Southern Nations, Nationalities, and Peoples (SNNP); Tigray; and 'Other regions'.

[5] According to the CSA (2013), approximately 20 per cent of age eligible (10–64 years) individuals were considered to be not economically active, and 4.5 per cent of the economically active population was unemployed.

better students or more entrepreneurial, while others are more equipped, meaning, physically or in terms of skills, to remain working on the farm. In addition, cultural norms characterize specific individual activities. For example, women in Ethiopia are discouraged to plow agricultural land and engage in other specific agricultural activities. We assess both household- and individual-level labour diversification in order to assess how youth are taking advantage of employment opportunities outside of their own-family farm work. We first evaluate labour portfolios at the household-level to understand how diversification of income differs by the age of the household head. Then, we investigate individual-level labour activities to understand who diversifies within the household.

5.2.5 Household-level Labour Diversification

In order to evaluate labour diversification within households, we split the sample by youth and mature households based on the age of the household head. We compare mature-headed households to three youth categories (overall youth ages 15–34 years; young youth ages 15–24; and experienced youth ages 25–34). The data suggest that a significantly lower proportion of workers in youth-headed households, in all youth age cohorts, work exclusively on their own agricultural land (Table 5.4). Whereas 84 per cent of mature-headed households dedicate all of their household labour to their own agricultural production, approximately 8 percentage points less, 76 per cent, of youth-headed households focus their available labour solely on own family farm agricultural activities (Table 5.4).

More youth-headed households have diversified labour portfolios compared to mature-headed households. A greater share (16 per cent) of youth-headed households between the ages of 25 and 34 years have a mix of own family farm and nonfarm labour compared to mature households (13 per cent), while younger households (age 15–24) show less diversification compared to mature households (Table 5.4). This may be because older youth (age 25–34) have gained the necessary experience and have expanded their social network to search out nonfarm opportunities, while the younger households are still reliant on parental support, have fewer household members, and lack the necessary resources to diversify their household labour portfolio. Finally, a greater share of youth-headed households in all age cohorts are engaged exclusively in the nonfarm sector. Within the nonfarm category, most individuals are working in the non-agricultural sector. This follows agricultural practices in Ethiopia, where limited labour demand for agricultural work exists due to labour–sharing customs in rural areas (*debbo* and *wonfel* systems).[6]

[6] For more information on *debbo* and *wonfel* systems, see Krishnan and Sciubba (2009).

Table 5.4. Allocation of household labour to own farm, other farms, or off-farm, by age cohort of household head, 2013–14, per cent of households

	Mature-headed HHs (aged 35–64)	Youth-headed HHs (aged 15–34)	Young youth-headed HHs (aged 15–24)	Experienced youth-headed HHs (aged 25–34)
Own family farm	83.8	75.5 ***	74.9 ***	75.6 ***
Mixed own farm and nonfarm	12.9	16.3 ***	11.4	16.9 ***
Off own-farm (agriculture)	*9.1*	*10.3*	*12.6*	*10.1*
Off own-farm (non-agriculture)	*90.9*	*89.7*	*87.4*	*89.9*
Off-farm	3.4	8.1 ***	13.7 ***	7.5 ***
Off own-farm (agriculture)	*7.5*	*7.0*	*7.9*	*6.9*
Off own-farm (non-agriculture)	*92.5*	*93.0*	*92.1*	*93.1*

Note: t-tests are relative to mature households; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Ethiopia Socioeconomic Survey (2013/14).

5.2.6 Individual-level Labour Diversification

Given that the majority of agricultural production in Ethiopia involves a single harvest annually, on-farm work is a highly seasonal activity. Individuals may seek out other income-earning opportunities off the farm during the slack agricultural season. In order to compare individual engagement in nonfarm labour opportunities, we split the sample of individual workers between youth aged 15 to 34 years and mature individuals aged 35 to 64 years. In addition, we disaggregate individuals over geographic space to explore the supply of nonfarm labour opportunities in rural, small town (centres with a population of less than 10,000 people), and urban areas (centres with more than 10,000 people).

Focusing on rural areas, and taking into account only those individuals who report working on at least one activity (on-farm or off-farm) approximately the same amount of youth work exclusively on own-farm activities (83 per cent) compared to mature rural individuals (85 per cent). The data suggest that there is little demand for nonfarm work in rural Ethiopia, with only 11 per cent of youth and mature individuals having a mixed on-farm and nonfarm work portfolio (Table 5.5). When splitting the youth cohort between young youth (those aged 15–24) and experienced youth (aged 25–34), data suggests that a greater share of the young youth (87 per cent) in rural areas are engaged exclusively in own-farm activities while 77 per cent of experienced youth are exclusively working on their own farm. Almost one-fifth (19 per cent) of experienced youth in rural areas have a mix of on-farm and off-farm employment (Appendix 5.A2).

Table 5.5. Labour type, by location and age cohort, 2013

	Percentage share of youth (age 15–34)			Percentage share of mature (age 35–64)		
	Rural	Small town	Urban	Rural	Small town	Urban
Own farm only	83.0	24.2	6.3	84.7	23.0	5.7
Own farm and off-farm	13.6	16.7	4.0	13.3	25.5	5.8
Own farm & NFE	11.2	12.6	2.6	10.5	15.3	3.6
Own farm & wage	2.2	3.3	1.4	2.4	8.4	1.9
Own farm & NFE & wage	0.3	0.7	0.0	0.4	1.8	0.3
Off-farm[1]	3.4	59.1	89.7	2.0	51.5	88.6
NFE	2.3	37.5	34.7	1.3	36.1	35.6
Wage	1.0	17.8	52.6	0.6	9.9	49.2
NFE & wage	0.1	3.7	2.4	0.2	5.5	3.8
Working population (thousands)	19,791.0	135.1	2,241.1	12,840.4	98.8	1,331.1

Notes: [1] Off-farm work comprises individuals who work in off-farm enterprise and/or wage work. [2] Students are defined as those who do not report time working in own-farm, wage, or off-farm enterprise activities and report activity as 'student'.

Source: Ethiopia Socioeconomic Survey (2013/14).

Given the limited nonfarm activity reported in rural areas, one would expect that small towns play an important role in providing light manufacturing, trade, and other services. Small towns do provide greater opportunities for nonfarm labour compared to rural Ethiopia. Almost 60 per cent of youth in small towns report working exclusively in off-farm activities, while 52 per cent of mature individuals work in off-farm activities. A greater share of mature individuals in small towns (26 per cent) work in a mix of own- and off-farm work, while 17 per cent of youth work in a mix of own- and off-farm work. Among the youth population, small towns are important hubs for education (approximately 17 per cent of youth in small towns are students). However, it is unclear how potential higher educational attainment is translated into higher paying nonfarm wage employment (Table 5.5). Nonfarm enterprise work is the predominant nonfarm labour opportunity for youth in small towns, encompassing more than double the number of youth engaged exclusively in wage work.

Finally, working individuals living in urban areas (cities of 10,000 people or more) are predominantly engaged in nonfarm work. Wage labour is the primary income earning activity in urban areas, encompassing 53 per cent of youth and 49 per cent of mature individuals' activities. Nonfarm enterprise work remains an important share of nonfarm work in urban areas—35 per cent of youth and mature individuals (Table 5.5).

The youth workforce that focuses solely on own-farm activities reports working for only 21 weeks of the year on average (Table 5.6). Mature workers

Table 5.6. Average time worked per year by type of work, by age cohort, weeks

Working youth (15–34 years)	All workers	Exclusive farmers	Exclusive off-farmers	Mixed farm and off-farm workers
Average time worked per year	**27.7**	**21.6**	**45.7**	**45.7**
Farming own-farm	18.1	21.6	–	15.3
Off-farm work[1]	9.5	–	45.7	30.4
Wage	*3.9*	–	*25.5*	*5.9*
Nonfarm enterprise[2]	*5.6*	–	*20.2*	*24.4*
Working mature (35–64 years)				
Average time worked per year	**32.2**	**27.2**	**48.2**	**49.1**
Farming own-farm	23.2	27.2	–	18.2
Off-farm work[1]	8.9	–	48.2	30.9
Wage	*3.7*	–	*26.8*	*7.4*
Nonfarm enterprise[2]	*5.2*	–	*21.4*	*23.5*

Notes: [1] Off-farm work consists of off-farm enterprise and wage work.
[2] Individual time worked in a nonfarm enterprise was not collected, thus we allocate the full amount of time that the nonfarm enterprise was in operation (total weeks) to each person that is reported working in the nonfarm enterprise.

Source: Ethiopia Socioeconomic Survey (2013/14).

engaged exclusively in farming report working for 27 weeks of the year. These data suggest that the majority of the workforce in Ethiopia (68 per cent of rural workers and 58 per cent of the overall workforce) are not economically active for more than half of the year. Individuals who have a mixed portfolio of own-farm and nonfarm labour are engaged in work for more than double the time—46 and 49 weeks for youth and mature workers, respectively—spent at work by those who work exclusively on their own farm (Table 5.6). However, workers who mix farm and nonfarm work make up only about 10 per cent of the total workforce regardless of age. Similarly, youth and older workers exclusively engaged in wage or nonfarm enterprise activities report working for 46 and 48 weeks, respectively, but these also represent a small share of the overall workforce. We find similar results when splitting the youth sample into young youth (15–24) and experienced youth (25–34) (Appendix 5.A3).

5.3 Youth and Agricultural Productivity

The labour trends discussed above suggest that agriculture remains an important livelihood for the majority of rural youth (63 per cent) and the overall population. However, limited nonfarm labour opportunities are constraining a large share of

individuals from reaching their full working potential. Those who are solely engaged in own-farm activities, 78 per cent of the overall working population, report being economically active for only about half of the year. Given limited nonfarm labour demand, as well as the large share of rural youth that work exclusively in agriculture, we now assess to what degree youth are leading any agricultural transformation processes in Ethiopia, particularly those that involve specialization in high-value crops or the utilization of modern technologies.

The goal of education policy in Ethiopia has been, in part, to produce educated farmers who would then be able to effectively adopt new agricultural technologies (MOE 2005). These objectives continue to underpin the national education policy. This would suggest that as rural youth create their own, independent households and acquire their own agricultural land, they may seek solutions to increase agricultural productivity and overall welfare via agricultural intensification, diversification, and modernization.

Table 5.7 compares the characteristics of agricultural households located in rural and small towns (less than 10,000 people), disaggregated by the age of the household head.[7] Several differences stand out. First, youth-headed households have access to significantly less agricultural land compared to mature-headed households. Youth-headed households own and operate approximately 0.8 and 1.4 hectares, respectively, compared to mature-headed households that own and operate 1.5 and 1.7 hectares, respectively. Limited data suggest that the young youth-headed households (aged 15–24 years) have greater difficulty accessing land than the experienced youth-headed households (between the ages of 25 and 34 years), however this result should be read with caution given the small sample size of young youth-headed households.

Landlessness is also greater among youth-headed households. For example, 7 per cent of mature-headed households living in rural and small town areas are landless, compared to 14 per cent of youth-headed households. Similarly, the share of landlessness among the youngest households (15–24 years old) reaches 21 per cent, while 13 per cent of experienced youth-headed households are landless (Table 5.7). This follows recent research by Bezu and Holden (2014) who found that youth in the rural south of Ethiopia have limited access to agricultural land due to land scarcity and land market restrictions. Headey, Dereje, and Taffesse (2014) also report declining farm sizes over time, with younger rural households facing larger constraints in obtaining agricultural land.

Finally, youth are not more likely to implement agricultural enhancing technologies (improved seed, cash crop production, and row planting) compared to

[7] Research shows that a variety of factors affect household uptake of agricultural technologies. Extensive literature has analysed specific issues including: physical and human capital endowments (Pender and Fafchamps 2006); access to agricultural extension (Abrar, Morrissey, and Rayner 2004); supply of seeds (Dercon and Hill 2009); heterogeneity of fertilizer success (Suri 2011); risks of negative shocks (Dercon and Christiaensen 2011); and access to credit (Duflo, Kremer, and Robinson 2011).

Table 5.7. Agricultural household-level characteristics in rural and small town areas, by age cohort of household head, means

	Mature-headed HHs (35–64)	Youth-headed HHs (15–34)	Young youth-headed HHs (15–24)	Experienced youth-headed HHs (25–34)
Land characteristics				
Operated area, ha	1.74	1.38 *	0.75 **	1.46
Owned area, ha	1.49	0.82 ***	0.59 *	0.85 ***
Landless, %	7.2	14.0 ***	20.6 ***	13.2 ***
Good agricultural potential, %	26.4	24.1	16.5 **	25.0
Agricultural inputs				
Inorganic fertilizer, %	59.9	57.7	44.5 ***	59.3
Organic fertilizer, %	67.7	59.8 ***	53.0 ***	60.7 ***
Irrigation, %	09.8	10.8	14.5	10.4
Herbicide, %	33.9	39.3 ***	33.9	40.0 ***
Tractor, %	4.2	6.6 ***	08.9 **	06.3 **
Improved seed, %	30.1	29.0	26.5	29.3
Row planting, %	50.0	45.1 ***	51.2	44.4 ***
Grow cash crop, % [a]	82.3	78.3 ***	75.6 **	78.7 **
Receive agricultural credit, %	23.8	20.5 **	08.4 ***	21.9
Receive agricultural extension, %	45.8	40.2 ***	26.2 ***	41.8 **
Household characteristics				
Household size, number	6.18	4.85 ***	3.82 ***	4.97 ***
Number of observations	*2,752*	*1,024*	*135*	*889*

Note: t-tests are relative to mature households; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

[a] Cash crops include beans, nuts, sesame and other seeds, spices, fruit, vegetables, coffee, chat, cotton, sugar cane, and tobacco.

Source: Ethiopia Socioeconomic Survey (2013/14).

mature-headed households. However, compared to mature households, youth use more technologies that are labour-reducing, such as herbicides and tractors. This is in line with recent work by Bachewe et al. (2015) and Minten et al. (2013) who found that substitution of labour with labour-saving modern inputs, in particular herbicides, is increasing in lieu of time spent on weeding. This may be due to the smaller household size of youth-headed households which creates a labour-constrained environment in which such households will seek technologies to decrease labour demands in agricultural work. Overall, these figures suggest that agriculture may not be the optimal or first choice of employment among youth-headed households, given the current environment.

5.4 Correlates of Youth Engagement in Nonfarm Employment

A rich literature has evaluated the determinants of nonfarm labour engagement including disaggregated analysis of individuals' decisions to seek out skilled versus unskilled nonfarm labour opportunities (Reardon, Berdegue, and Escobar 2001, Winters et al. 2009, Mduma and Wobst 2005, Bezu, Holden, and Barrett 2009); market access and nonfarm participation (Fujita, Krugman, and Venables 1999, Renkow 2006, Henderson, Shalizi, and Venables 2001, Fafchamps and Shilpi 2003, Deichmann, Shilpi, and Vakis 2009); and effects of income or wealth on nonfarm labour choices (Bezu, Barrett, and Holden 2012, de Janvry and Sadoulet 2001, Woldehanna and Oskam 2001, Dercon and Krishnan 1996). However, largely missing from the literature on Ethiopia is an in-depth evaluation of the transition of youth from employment on-farm into the nonfarm sectors. A recent report by the World Bank outlines the opportunities and challenges for youth employment in Africa and provides a comprehensive overview of potential growth sectors, including agriculture. However, the discussion in this overview is limited to country and regional levels (Filmer and Fox 2014). Bezu and Holden (2014) evaluated the determinants of youth aspirations to pursue nonfarm employment in Ethiopia. However, they did not examine the experience of youth that already are in the nonfarm work force. This section addresses some of these knowledge gaps by evaluating the determinants of youth employment in the nonfarm sector.

Appendix 5.A4 provides the average values for key variables used in the empirical analysis. The profiles of rural and small town workers in Ethiopia differ in terms of individual, household, and location characteristics. Youth between the ages of 25 and 34 years are generally more active in the nonfarm sector (wage or nonfarm enterprise), while youth between the ages of 15 and 24 tend to work more on own-farm labour. Those that diversify into wage labour activities have completed more schooling (36 per cent completed primary school). Primary school completion rates of about 10 per cent are approximately the same for individuals that diversify into a nonfarm enterprise activity and those that work solely on own-farm activities, suggesting that nonfarm enterprise activities do not require a significantly different skill set or greater experience level than does own-farm work. Compared to own-farm workers, wage and nonfarm enterprise workers report higher annual expenditure per capita, which may be associated with higher potential profitability of off-farm work.

In this analysis, nonfarm labour activities refer to any labour that is conducted off the own-family farm. We limit our sample to individuals living in rural or small town areas. We are interested in assessing workers that choose to diversify into nonfarm labour activities, meaning wage or nonfarm enterprise activities, in addition to working on their own-family farm in either planting or harvesting.

The sample is split into three categories: individuals who work solely on their own family farm (omitted); individuals who report working in a mix of own-family farm and NFE; and individuals who report working in a mix of own-family farm and wage work.[8] Correlates with diversification are estimated using a multinomial logit model:

$$\log\left(\frac{\pi_{wi}}{\pi_{ni}}\right) = \alpha_{wr} + \beta_w X_i,$$

where π_{wi} is the odds of seeking off-farm work w, π_{ni} is the odds of remaining on the family farm and working solely in agriculture, and parameter α_{wr} is the baseline hazard of work in region r for the specific work type w. β_w is a vector of parameter estimates. X is a vector that denotes the factors that influence labour choice. In order to take into account unobserved variables within districts that affect employment, such as access to infrastructure, information, or agroecological zone, standard errors are clustered at woreda level. Finally, the coefficients in a multinomial logit model are calculated in relation to a base outcome and thus are difficult to interpret directly. However, average marginal effects can be predicted, so we focus the discussion on the reported marginal effects. We set our base outcome as individuals who work exclusively on their own-farm.

We estimate three models to assess correlations between youth and livelihood choice. The first model pools the rural and small town working samples ages 15 to 64 years old to test if youth (aged 15–34) are more likely to enter off-farm labour opportunities compared to mature individuals (aged 35–64). The second model is limited to youth aged 15–24 to evaluate how individual, household and location variables are correlated with nonfarm labour. The third model is limited to youth aged 25–34 and follows the same methodology of the second model to evaluate how more established youth are engaged in the labour market. We split youth categories assuming that young youth and experienced youth differ by the amount of work experience they have attained and the social network they have built, which may affect an individual's ability to secure off-farm work.

5.4.1 Potential Determinants of Engaging in Off-farm Employment in Rural Ethiopia

Diversification into nonfarm employment is shaped by a variety of conditioning factors. Individuals may be *pushed* from agricultural work into nonfarm activities

[8] Estimation of the multinomial logit model assumes that probabilities of alternative choices are independent of each other, referred to as the Independence of Irrelevant Alternatives (IIA). In order to test for this independence, we use the Small-Hsiao test, and find we are unable to reject the IIA assumption for the multinomial logit model presented in this analysis (Small and Hsaio 1985).

in order to seek out sufficient sources of income, alternatively individuals may be *pulled* into nonfarm activities given higher returns to labour and capital compared to agriculture. [9] Lucas (2015) focuses on rural–urban migration issues and argues that these decisions are driven by differentials in opportunities across locations. Focusing specifically on the choice of diversifying labour portfolios, individuals differ in their ability to take advantage of nonfarm opportunities based on their human, physical, and financial capital. For example, some individuals are more educated, with better access to savings for start-up capital and greater options for nonfarm work due to proximity to a market or transportation network.

We include a variety of explanatory variables in our multinomial logit analysis in order to account for differences across individuals and households. At the individual level, we include a variable that disaggregates odds of employment by age in the regression that pools all age groups: youth aged 15–24, youth aged 25–34, and mature aged 35–64 (omitted category). Including these variables in a multivariation regression allows us to adjust for inherent differences across age groups which may mask the interpretation of the descriptive statistics discussed above. These age variables attempt to capture experience level and potential life-cycle effects, as well as to explicitly evaluate youth participation in nonfarm activities. We also include whether or not the individual is a household head, female, or married. If an individual is the household head, she or he may be more inclined to stay working on the farm in order to insure sufficient agricultural output. In addition, Ethiopia's land tenure system requires residency on the farm to maintain usufruct rights to farmland which may create greater disincentives for household heads to seek alternative employment. Education—measured by whether an individual completed primary school—is also an important factor, given that it improves the value of labour, raises the opportunity costs for an educated individual to stay at home and engage in lower paying agricultural work, and potentially enhances the individual's social network to facilitate access to nonfarm jobs.

At the household level, we include a variety of variables that take into account household assets. For example, owning a relatively large agricultural land area may indicate better farming potential and food self-sufficiency, which may incentivize individuals to remain in agriculture. Alternatively, larger land holdings may be associated with higher crop incomes, which could provide start-up capital for work in the nonfarm sector.[10] Due to restrictions on land ownership in Ethiopia, land rental markets are very active, thus we include both *total agricultural land owned* and *total agricultural land operated* to account for these factors. Given that

[9] Moretti (2004) and Ciccone and Peri (2006) examine pull factors of migration and their links to agglomeration economies.

[10] See Reardon et al. (2007) and Bezu and Barrett (2012) for a greater discussion on land holdings and nonfarm labour diversification.

we are limited to cross-sectional data, it is possible that we introduce simultaneity bias in our regression framework by including household assets. For example, not only does land holding size potentially affect diversification but diversification could affect land holding size. This is particularly accute when using contemporraneous explanatory variables. Thus, we discuss the results in terms of correlates of diversification rather than addressing causation.

We also include livestock ownership in the form of Tropical Livestock Units owned by the household, per capita expenditure of the household, and whether a household is located in an area with good agricultural potential. We hypothesize that youth who have access to land with good agricultural potential are less likely to seek nonfarm employment. In addition, we include whether a household has experienced a flood or drought during the last year in order to take into account potential fluctuations in agricultural productivity. Such fluctuations may incentivize individuals to seek other forms of employment as a means of insurance against agricultural uncertainty.

In addition to physical endowments at the household level, individuals coming from larger households with greater potential labour resources may exhibit a greater probability of working in the nonfarm sector because their labour would not be as critical for agricultural production within such households. In order to account for differences in female and male labour roles in rural Ethiopia (for example, it is rare for females to cultivate land in Ethiopia—see Deininger, Ali, and Tekie 2008), we include the number of working age (ages 15–64) females and the number working age males within the household, as well as total household size.

Household variables are included to differentiate between households that have received agricultural credit or agricultural extension. These variables represent incentive factors to stay working on-farm because they are targeted to augment agricultural productivity.[11] Finally, distance to a market or trafficked road captures a household's locational potential for nonfarm labour opportunities, as well as assessing the effect on transaction costs, and thus, an individual's willingness to seek nonfarm labour. Job search costs would be lower for those that live closer to markets or key transportation corridors, while at the same time they may be better informed of potential job opportunities.

[11] Recent work evaluated credit via microfinance programmes aimed at nonfarm activities and found mixed results with regards to such credit inducing greater engagement in non-agricultural income earning opportunities. Hagos (2003) found a positive effect of microfinance credit programmes on income level changes derived from self-employment. However, no effect was found on participation in wage employment. Bezu and Holden (2014) reported that access to savings and credit are significant factors for transitioning into high-return rural nonfarm activities. Tarozzi, Desai, and Johnson (2015) evaluated access to microfinance credit in Amhara and Oromiya on a variety of outcomes and found no significant effects on nonfarm enterprise creation.

5.4.2 Results and Discussion

The coefficients in a multinomial logit model are calculated in relation to a base outcome and are difficult to interpret directly. However, average marginal effects can be predicted, so we focus the discussion on the reported marginal effects. Model 1 evaluates whether youth are more likely to diversify into wage or nonfarm enterprise opportunities in addition to working on own-family farm, by testing whether the coefficients on the age indicators are statistically different than zero. Analysis suggests that older youth (age 25–34) have a greater probability of diversifying into nonfarm enterprise activities compared to mature individuals, however this does not hold true for youth ages 15–24 (Table 5.8). It may be that the younger cohort of youth have not built up sufficient work experience or developed an appropriate social network to successfully engage in a nonfarm enterprise. Although older youth are more engaged in nonfarm enterprise labour, wage labour is less accessible to Ethiopia's youth. According to Model 1, youth (regardless of their age) are no more active in the wage labour market than are mature individuals (aged 35–64).

Focusing specifically on youth (Models 2 and 3), those who are located in areas with good agricultural potential have a greater probability of diversifying into nonfarm enterprises, especially older youth aged 25–34 years old (Table 5.8, Model 3). This supports the findings of previous research that contended that local nonfarm income is greater in better agroclimatic areas, whereas migration is a more common strategy in unfavourable climatic areas (Reardon 1997, Reardon et al. 2007). Woldehanna and Oskam (2001) reported that households in Tigray during good production seasons prefer nonfarm enterprise work over wage employment, suggesting that a good production season gives farmers the financial capacity to start a nonfarm enterprise. Youth aged 15–24 that are located in good agricultural productivity areas are also more likely to mix farm and nonfarm enterprise work (Table 5.8, Model 2). Research conducted by Bezu and Holden (2014) found that a lack of access to land was driving youth migration from agriculture. Our analysis suggests that youth (age 25–34) with greater land ownership have a 3 per cent lower probability of diversifying into wage labour compared to working exclusively on their own family farm. Overall, assets and capital are associated with mature youth employment decisions. Greater ownership of land, livestock, and access to agricultural credit decrease the probability that mature youth diversify out of farming into wage labour activities (Table 5.8, Model 3). We do not witness the effects of asset ownership in the young youth sample due to lack of variation among variables; young youth have less asset accumulation across all categories.

Similar to agricultural endowments, agricultural shocks can have an effect on an individual's choice to seek alternative income sources outside of agriculture.

Table 5.8. Multinomial models of determinants of type of labour engagement for rural workers in Ethiopia, by age cohort

Explanatory variables	Model 1		Model 2		Model 3	
	Working population: age 15–64		Young youth working population: age 15–24		Experienced youth working population: age 25–34	
	Mix of own-farm and wage work	Mix of own-farm and nonfarm enterprise	Mix of own-farm and wage work	Mix of own-farm and nonfarm enterprise	Mix of own-farm and wage work	Mix of own-farm and nonfarm enterprise
Age 15–24, 0/1	–0.016 (0.010)	0.013 (0.019)	–	–	–	–
Age 25–34, 0/1	0.000 (0.006)	0.049 *** (0.015)	–	–	–	–
Household head, 0/1	0.002 (0.009)	0.037 ** (0.017)	0.019 ** (0.009)	0.030 (0.035)	–0.014 (0.016)	0.049 (0.033)
Female, 0/1	–0.036 *** (0.011)	0.037 ** (0.016)	–0.004 (0.009)	0.034 (0.021)	–0.061 ** (0.025)	0.079 *** (0.028)
Married, 0/1	0.005 (0.007)	0.011 (0.016)	–0.001 (0.010)	0.039 (0.024)	–0.006 (0.012)	0.016 (0.034)
Completed primary school, 0/1	0.045 *** (0.008)	0.001 (0.018)	0.030 *** (0.010)	0.018 (0.020)	0.055 *** (0.011)	–0.032 (0.035)
Adult (age 15 to 64) males in household, number	–0.006 ** (0.003)	–0.022 *** (0.007)	0.000 (0.004)	–0.009 (0.010)	–0.015 (0.008)	–0.003 (0.021)
Adult (age 15 to 64) females in household, number	0.004 (0.003)	0.002 (0.008)	0.002 (0.004)	0.001 (0.011)	0.008 (0.005)	0.018 (0.019)
Expenditure, '000 birr/ capita/year	0.005 *** (0.001)	0.025 *** (0.005)	0.003 *** (0.001)	0.016 *** (0.006)	0.006 *** (0.002)	0.031 *** (0.011)
Agricultural area owned, ha	–0.002 (0.002)	–0.006 (0.006)	0.007 (0.011)	–0.003 (0.009)	–0.026 ** (0.011)	0.001 (0.022)
Agricultural area operated, ha	0.002 (0.002)	0.004 (0.007)	–0.017 (0.014)	0.006 (0.009)	0.004 (0.002)	–0.010 (0.014)
Receive agricultural extension, 0/1	–0.016 ** (0.006)	–0.003 (0.017)	–0.007 (0.010)	–0.012 (0.025)	–0.018 (0.011)	0.013 (0.030)
Receive agricultural credit, 0/1	–0.006 (0.009)	–0.021 (0.019)	0.001 (0.009)	–0.004 (0.024)	–0.068 ** (0.027)	–0.051 (0.033)

Continued

Table 5.8. Continued

Explanatory variables	Model 1		Model 2		Model 3	
	Working population: age 15–64		Young youth working population: age 15–24		Experienced youth working population: age 25–34	
	Mix of own-farm and wage work	Mix of own-farm and nonfarm enterprise	Mix of own-farm and wage work	Mix of own-farm and nonfarm enterprise	Mix of own-farm and wage work	Mix of own-farm and nonfarm enterprise
Livestock ownership, Tropical Livestock Units	−0.002 * (0.001)	−0.004 (0.003)	0.000 (0.000)	−0.005 (0.003)	−0.006 * (0.003)	0.000 (0.006)
Experienced drought, 0/1	0.005 ** (0.007)	−0.079 ** (0.036)	0.005 (0.009)	−0.054 * (0.050)	0.013 (0.017)	−0.095 (0.070)
Experienced flood, 0/1	−0.031 (0.020)	-0.005 (0.050)	−0.007 (0.012)	0.028 (0.044)	−0.366 *** (0.069)	−0.028 (0.102)
Good agricultural potential land, 0/1	−0.010 (0.009)	0.052 * (0.020)	−0.020 * (0.011)	0.042 * (0.025)	−0.011 (0.017)	0.086 *** (0.031)
Distance to nearest market, km	−0.001 (0.001)	0.001 (0.002)	−0.001 (0.001)	−0.001 (0.003)	−0.003 (0.002)	0.002 (0.003)
Distance to nearest major road, km	0.001 (0.003)	0.002 (0.006)	−0.004 (0.005)	0.005 (0.007)	0.004 (0.003)	0.000 (0.010)
Observations	*7,567*		*2,526*		*1,754*	

Note: The base outcome for all three models are individuals that work exclusively on their own-farm. Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Ethiopia Socioeconomic Survey (2013/14).

We find this particularly true for youth aged 25–34 years. In this case, those who experienced a flood during the last year had a 37 per cent less probability of expanding into a wage labour job, however this effect may be temporary and reflect a post-shock necessity of rehabilitating own agricultural land rather than an overall trend of off-farm labour activity. Alternatively, this analysis does not capture wage or nonfarm employment at alternative locations, thus a reduction in wage labour may coincide with an increase in wage labour outside of the sample woreda. Research on the impact of shocks on labour diversification suggests a greater propensity to diversify. Bezu and Barrett (2012) assessed employment transitions

out of agriculture between 2004 and 2009 and found that shocks that reduced agricultural income motivated individuals to seek out high-return rural nonfarm employment. Similar results of agricultural shocks increasing longer term non-agricultural earnings were reported by Porter (2012) using data from 1994–2004.

While good agricultural potential and greater access to capital and assets (agricultural credit and livestock) decrease the likelihood of diversifying into nonfarm labour, distance to a market or road does not affect the probability of youth finding nonfarm employment. This may be due to several reasons. First, a large share of the rural population in this sample live relatively far from a market (on average about 55 km). Second, thin labour markets in small towns and rural areas may limit youth's ability to take advantage of off-farm wage opportunities simply because there is not enough off-farm labour demand. These relationships suggest that in Ethiopia the rural and small town nonfarm sector is influenced primarily by push factors (lack of land, agricultural services, and assets) rather than driven by urban or small town labour demand.

When comparing youth labour decisions to diversify into nonfarm employment, it becomes apparent that experienced youth (ages 25–34) have a greater likelihood of engaging in nonfarm work (in addition to own-family farm labour) compared to mature individuals (age 35–64). Although difficult to determine from cross-sectional data, the analysis presented in this chapter suggests that youth—in particular, experienced youth—may be driving the small share of labour diversification in rural and small towns. Moving forward, understanding if labour diversification occurs step-wise—meaning, individuals move from working exclusively on their own-farm activities to diversifying into nonfarm in addition to own-farm activities, and then finally transitioning fully into nonfarm labour activities—will provide greater insight into Ethiopia's likely economic trajectory over the next few decades. If this is the mode of labour transition within Ethiopia, we may be witnessing the initial transition of an economy moving towards greater structural transformation.

5.5 Conclusion

Over the last several decades, Ethiopia has focused its public investments in economic growth according to its ADLI strategy. This led to large increases in agricultural output. Simultaneously, the country has experienced impressive economic growth at approximately 11 per cent per year during the last decade. Although these trends point to structural transformation as a major driver of economic growth, labour force survey data suggest that Ethiopia remains at a very early stage in its structural transformation. Whereas one would expect to see a transition out of agriculture into higher value nonfarm employment, we find

that the share of economically active people working in agriculture only decreased by approximately 3.6 percentage points (from 80.2 to 76.6 per cent) between 2005 and 2013.

Focusing on youth employment, the data suggest that few rural and small town youth (13 per cent) engage in nonfarm economic activities. However, individuals who are exclusively engaged in own-farm activities are underemployed, working approximately for half of the year given the seasonality inherent to crop agriculture in Ethiopia. Given the large share of rural youth that have remained working exclusively in agriculture, we assess if youth are taking a lead role in agricultural transformation processes in Ethiopia. Comparing youth- versus mature-headed households, we find that on average youth-headed households have less agricultural land, less access to services (credit and extension) and are less likely to implement agricultural enhancing technologies (inorganic fertilizer, improved seeds, row planting, and so on) compared to mature-headed households. Although, compared to more established households headed by older adults, youth-headed households face greater constraints in the agricultural sector, the analyses do not show that youth are leading the adoption of agricultural enhancing technologies, such as improved seed, cash crop production, or row planting. However, we do see a greater share of youth using technologies that are labour-reducing, such as herbicides and tractors.

Given the constraints faced by Ethiopian youth to access land and agricultural services, we evaluate whether youth are turning towards nonfarm employment as an alternative livelihood strategy. The econometric results suggest that youth aged 25–34 have a higher probability of engaging in nonfarm enterprise activities. However, neither youth age cohort is more likely to work in wage labour compared to exclusively working on own-farm activities. The analysis suggests that wage labour opportunities are few, and those who obtain wage employment tend to be male, with a higher education, and have fewer agricultural resources than those who do not engage in wage labour. This last factor suggests that push factors have a large influence on youth nonfarm employment decisions.

Although diversification out of agriculture reaps potentially higher wage opportunities in the nonfarm sector, our analysis suggests that employment opportunities outside of agriculture are limited in rural Ethiopia. This finding parallels that of recent research by Diao and McMillan (2015) in which they suggest from their results that proactive policies or foreign investment may be needed to spark structural transformation. Given that the majority of Ethiopia's population lives in rural areas and works in agriculture, investments in agriculture-enhancing technology and services remains important to increase productivity, and ultimately to spark greater nonfarm demand for goods and services. Continuing to evaluate constraints and ameliorate conditions for youth to be productively employed in agriculture and in the nonfarm sector as the economy continues to grow is crucial to ensuring healthy, sustainable economic growth moving forward.

Appendix

Table 5.A1. Water and wood collectors, numbers (in thousands) and percentage of the economically active population, by age cohort, sex, and rural/urban, 2013

Age category	Male	Female	Urban	Rural
10 to 14 years	311.7	1,072.7	89.1	1,295.3
	(22.5)	(77.5)	(6.4)	(93.6)
15 to 24	178.6	1,254.6	88.9	1,344.3
	(12.5)	(87.5)	(6.2)	(93.8)
25 to 35	30.3	933.3	42.2	921.3
	(3.1)	(96.9)	(4.4)	(95.6)
36 to 55	22.8	842.8	38.2	827.4
	(2.6)	(97.4)	(4.4)	(95.6)
Over 55	12.3	208.1	12.1	208.3
	(5.6)	(94.4)	(5.5)	(94.5)
Total	**555.7**	**4,311.5**	**270.5**	**4,596.7**
	(11.4)	**(88.6)**	**(5.6)**	**(94.4)**

Note: Percentage shares are reported in parentheses.

Source: National Labour Force Survey (2013).

Table 5.A2. Youth labour type, by location and age cohort, 2013, present

	Percentage share of young youth (age 15–24)			Percentage share experienced youth (age 25–34)		
	Rural	Small town	Urban	Rural	Small town	Urban
Own-farm only	87.1	32.9	10.3	77.4	15.6	3.3
Own-farm and off-farm	9.9	12.2	3.3	18.7	21.2	4.5
Own-farm & nonfarm enterprise	8.2	9.4	2.3	15.3	15.8	2.8
Own-farm & wage	1.5	2.8	1.0	3.1	3.8	1.7
Own-farm & nonfarm enterprise & wage	0.2	0.0	0.0	0.4	1.5	0.0
Off-farm[1]	3.0	54.8	86.3	3.9	63.3	92.2
Nonfarm enterprise	2.3	42.3	36.5	2.3	32.7	33.3
Wage	0.6	10.2	47.7	1.5	25.5	56.2
Nonfarm enterprise & wage	0.1	2.4	2.1	0.1	5.1	2.7
Working population (thousands)	11,367.6	67.4	959.4	8,423.4	67.6	1,281.7

Notes: [1] Off-farm work comprises individuals who work in off-farm enterprise and/or wage work. [2] Students are defined as those who do not report time working in own-farm, wage, or off-farm enterprise activities and report activity as 'student'.

Source: Ethiopia Socioeconomic Survey (2013/14).

Table 5.A3. Average time worked per year by type of work, by youth age cohort, weeks

Working young youth (age 15–24)	All workers	Exclusive farmers	Exclusive off-farmers	Mixed farm and off-farm workers
Average time worked per year	**24.7**	**20.2**	**43.5**	**44.2**
Farming own farm	17.6	20.2	0	13.9
Off-farm work[1]	7.1	0	43.5	30.3
Wage	*2.7*	*0*	*21.9*	*5.8*
Off-farm enterprise[2]	*4.4*	*0*	*21.7*	*24.6*
Working experienced youth (age 25–34)				
Average time worked per year	**31.4**	**23.8**	**47.4**	**46.7**
Farming own farm	18.8	23.8	0	16.3
Off-farm work[1]	12.6	0	47.4	30.4
Wage	*5.5*	*0*	*28.3*	*6.1*
Off-farm enterprise[2]	*7.1*	*0*	*19.1*	*24.4*

Notes: [1] Off-farm work consists of off-farm enterprise and wage work.
[2] Individual time worked in a nonfarm enterprise was not collected, thus we allocate the full amount of time that the nonfarm enterprise was in operation (total weeks) to each person that is reported working in the nonfarm enterprise.

Source: Ethiopia Socioeconomic Survey (2013/14).

Table 5.A4. Profile of rural and small town workers (ages 15–64) by employment type, mean characteristics

	Own-farm	Wage	Nonfarm enterprise
Age 15–24, proportion	0.36	0.24 ***	0.29 ***
Age 25–34, proportion	0.24	0.35 ***	0.35 ***
Age 35–64, proportion	0.40	0.41	0.37
Household head, proportion	0.33	0.60 ***	0.39 ***
Female, proportion	0.49	0.20 ***	0.54 **
Married, proportion	0.59	0.69 **	0.67 ***
Completed primary school, proportion	0.10	0.36 ***	0.10
Student, proportion	0.13	0.05 ***	0.09 ***
Household size, number	6.64	5.89 ***	6.50
Adult males (age 15 to 64 years), number in household	1.82	1.52 ***	1.55 ***
Adult females (age 15 to 64 years), number in household	1.71	1.56 *	1.69
Expenditure, '000 birr/capita/year	1.38	2.95 ***	2.25 ***
Agricultural area owned, ha	1.62	1.24	1.22 *
Agricultural area operated, ha	1.94	2.23	1.60
Receive agricultural extension, proportion	0.52	0.34 ***	0.48
Receive agricultural credit, proportion	0.27	0.18 ***	0.22 ***
Livestock ownership, Tropical Livestock Units	4.24	2.87 ***	3.64 ***

Experienced drought, proportion	0.08	0.09	0.04 ***
Experienced flood, proportion	0.03	0.01 ***	0.03
Land with good agricultural potential, proportion	0.26	0.19 *	0.35 ***
Distance to nearest major market centre, km *	62.2	55.9 *	64.3
Distance to nearest major road, km	13.8	15.2	14.4
Observations	*5,737*	*337*	*1,493*

Note: t-tests are relative to own-farm workers; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. * Major market centres are defined by FEWSNET and do not include weekly markets

Source: Ethiopia Socioeconomic Survey (2013/14).

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