

# Can Migration be a Conduit for Transformative Youth Employment?

*Valerie Mueller and Hak Lim Lee*

## 2.1 Introduction

Migration has traditionally been considered a necessary component of the transformation process (de Brauw, Mueller, and Lee 2014). Rural workers are attracted to higher earning potential in the manufacturing or rural non-farm sectors (Harris and Todaro 1970). The latter process, which occurred in India, for example, was primarily driven by innovation and shifts in rural worker productivity. Both of these factors allowed for the creation of a rural labour surplus to transfer into the modern sector, as well as generated demand for additional goods and services in rural areas by augmenting the income of farmers (Hazell and Haggblade 1990).

Given demographic trends, African youth will be responsible for spearheading economic growth. Yet, they face more substantive barriers than their predecessors: declines in arable land (Jayne, Mather, and Mghenyi 2010, Muyanga and Jayne 2014), a lack of Green Revolution (Headey, Bezemer, and Hazell 2010, Nin-Pratt and McBride 2014) or government-sponsored industrialization (Jedwab and Vollrath 2015), and competition from the global economy (Headey, Bezemer, and Hazell 2010). In this chapter, we examine whether migration offers youth (ages 15–24, 25–34) access to more transformative forms of employment in four African countries, following the traditional pathways to structural change. While a few seminal youth migration studies have raised awareness of orphanhood in Africa (Beegle, De Weerd, and Dercon 2006, Beegle et al. 2010), applications which demonstrate whether migration is a conduit for diversification and productive employment among youth are rare.

In what follows, we first establish the knowledge gaps in the literature with respect to the relationship between migration and sector-specific youth employment in Africa. We then focus on addressing a few of the highlighted knowledge gaps using descriptive evidence in four countries. First, we present statistics on the level of engagement in exclusive non-agricultural employment and joint non-agricultural and agricultural employment by youth migration status. Second, we illustrate whether migration allows youth to generate greater returns to

production. In particular, we compare the agricultural income per capita of youth migrants and non-migrants over time. We further disentangle whether migrants are more likely to move into high-return versus low-return non-agricultural occupations to supplement the income analysis.

## 2.2 Literature Review

### 2.2.1 Youth Engagement in the Agricultural Sector

Recent empirical evidence in Africa suggests declining trends in the size of landholdings of rural households (Jayne, Mather, and Mghenyi 2010, Muyanga and Jayne 2014). In a few concentrated countries, these associations are driven by the underutilization of land due to conflict, forested area, or remoteness and isolation (Chamberlain, Jayne, and Headey 2014). Other African countries, specifically those covered in the LSMS-ISA, suffer from limited surplus of land and high population pressure. In light of the emerging scarcity of arable land, there is a growing research interest to uncover whether diminishing landholdings has been accompanied by increased agricultural intensification to maintain or enhance yields.

Sheahan and Barrett (2014) examine various input practices (use of fertilizer, improved seeds, agro-chemicals, animal traction, and mechanized equipment) among households in the LSMS-ISA countries. Although modern input use is relatively low in aggregate, the application of inorganic fertilizer and agro-chemicals has become more common in Ethiopia, Malawi, and Nigeria than documented in previous work by Minot and Benson (2009). Using alternative data sources, Headey and Jayne (2014) and Muyanga and Jayne (2014) show the application of the aforementioned inputs is positively related to changes in population density. The intersection between input intensification, land size, and labour use is of notable importance for understanding employment trends more broadly and youth employment patterns specifically.

Thus far, multiple studies find negative relationships between farm size and input use (Barrett, Bellemare, and Hou 2010, Bellemare 2013, Carletto, Savastano, and Zezza 2013, Headey, Dereje, and Taffesse 2014, Larson et al. 2014, Sheahan and Barrett 2014), which suggests intensifying farming practices may be used to overcome land constraints to productivity. For the case of Ethiopia, Headey, Dereje, and Taffesse (2014) find a small, positive correlation between farm size and hired labour, but a much stronger negative relationship with family labour and farm size. Their interpretation of the results is that small farms use land more intensively while large farms are labour constrained. Complementary relationships between labour and input use, particularly for small farms, could suggest an increase in the demand for family labour and perhaps youth employment.

Projections of youth employment in agriculture will depend not only on farm size but the substitutive and complementary nature of modern inputs and labour by stage of one's life cycle status.

The existence of agricultural wage labour markets and land rental markets may provide additional forums for youth to continue engaging in agriculture, under sparse opportunities for landownership (for example, as shown in Ethiopia by Bezu and Holden (2014)). With respect to the latter, Deininger, Xia, and Savastano (2015) show land-poor households and households with younger heads are more likely to take advantage of these opportunities to access land in Malawi, Nigeria, Niger, Tanzania, and Uganda. Dillon and Barrett (2014) foreshadow limitations to off-farm employment opportunities in the agricultural sector given existing market failures. First, in most cases, the percentage of households hiring workers for non-harvest types of employment exceeds the percentage of households hiring workers for harvest employment. Second, as the number of acres per household member increases, the hiring of outside workers does not increase proportionally. Economies of scale of labour, or credit market failures possibly explain these patterns.

The above studies imply youth participation in agricultural employment will depend on at least two factors. First, if land-constrained households are driven to intensify their land to overcome productivity constraints, then youth employment on family farms will depend on the complementary nature between those inputs and youth labour. Furthermore, whether youth self-select into on-farm or off-farm agricultural jobs will depend on the factor-bias of the input technology adopted (Bustos, Caprettini, and Ponticelli 2016). Second, increased access to land and opportunities for employment off of the farm may allow youth to continue working in agriculture. Understanding the nature of local land rental and sales markets will be important in measuring the determinants of youth employment in the agricultural sector, as well as the composition of medium and large-scale farms to gauge demand for agricultural wage labour.

### 2.2.2 Youth Diversification Out of Agriculture

A few stylized facts regarding diversification trends out of agriculture have emerged from the Sub-Saharan Africa employment literature. While diversification out of agriculture is on the rise (Jones and Tarp 2012), agriculture continues to absorb a significant share of the workforce (Jones and Tarp 2012, Page 2012, Davis, Di Giuseppe, and Zezza 2014, McCullough 2017). The nonfarm wage sector (private and public) has grown but participation remains less common (Jones and Tarp 2012, Fox and Sohnesen 2012); instead, the informal sector is the principal locus of new job creation (Jones and Tarp 2012, Fox and Sohnesen 2012, De Vreyer and Roubaud 2013, Nagler and Naudé 2014). Household entrepreneurship

has the potential to increase the marginal productivity of labour and enhance welfare (Reardon 1997, Grimm, Knorringer, and Lay 2012, Nagler and Naudé 2014, McCollough 2017).

Earlier household analyses emphasize the importance of household demographic composition and household head's age on diversification out of agriculture. Jones and Tarp (2012) and Nagler and Naudé (2014) find the percentages of adults and young male workers (Jones and Tarp only) are negatively associated with specialization in agriculture in Mozambique. Bezu and Barrett (2012) monitor employment transitions into and between low- and high-return rural nonfarm employment using panel data from Ethiopia (1999, 2004). They find transitions from low-return to high-return rural nonfarm employment are positively correlated with the number of children aged 5 to 14 in 1999. The authors posit that children may not directly engage in rural nonfarm employment, but serve as substitutes for adult household labour. Older heads are also found to be more likely to diversify out of agriculture (Nagler and Naudé 2014), but other studies have shown older heads can also revert back to agriculture after operating an enterprise (Bezu and Barrett 2012).

A logical next question is how will these trends affect youth. Researchers have first focused on educational trends to understand whether youth have different earning potential than previous generations. While education levels have increased, they remain low (Filmer and Fox 2014, Garcia and Fares 2008, Elder and Kone 2014). Rural youth are much less likely to be in school than their urban counterparts (Filmer and Fox 2014, Garcia and Fares 2008). Although labour participation remains high (McCullough 2017, Gracia and Fares 2008, Jones and Tarp 2012), underemployment is rife (Shehu and Nilsson 2014, Jones and Tarp 2012). Opportunities to diversify out of agriculture, particularly into high-return activities, may be low given extant skill deficits (Filmer and Fox 2014).

Elder and Kone (2014) report findings from the ILO's School-to-Work Transition surveys (2012–13) covering 15–29 year old individuals at the national level for eight countries in SSA (Benin, Liberia, Madagascar, Malawi, Tanzania, Togo, Uganda, and Zambia) with an average sample size of 3,300 persons. Forty-six per cent of the unemployed youth indicate employment searches lasting longer than a year, mainly in pursuit of establishing their own business or farm, or finding a job in the public or private sector. The biggest obstacle to finding employment was articulated to be a paucity of jobs, as well as insufficient qualifications for existing jobs. They find working youth tended to engage in skilled agricultural and fishery occupations (35.7 per cent), followed by service (25.7 per cent), shop and market sales work (18.3 per cent), elementary occupations (18.3 per cent), and craft and related trade work (10 per cent).

The aforementioned studies contend relatively high youth participation rates with a concentration in the agricultural sector in rural areas. One open question is to what extent are these rates influenced by the mobility of youth. Youth

migration patterns motivated by education (de Brauw, Mueller, and Woldehanna 2013) and orphanhood (Beegle, De Weerd, and Dercon 2006, Beegle et al. 2010) have been documented in various African contexts. The omission of youth migrants from surveys could influence how labour participation rates and shifts in employment are perceived in the broader literature.

Another discrepancy in the literature arises from the lack of detailed information on agricultural occupations and youth productivity. McCullough (2017) shows that the measure of productivity can affect marginal productivity of labour estimates. For example, when measuring output per person per year, the productivity of workers receiving wages in industry, agriculture, and enterprises are higher than on farms in Malawi, Tanzania, and Uganda. However, when the productivity ratio is based on output per hour, then she finds farm productivity is higher than for all other sectors in Ethiopia and Malawi but not Tanzania and Uganda. The differences are largely due to a higher number of hours supplied to nonfarm work. It is possible for youth to remain in agriculture, but they are positioned to drive a structural transformation in agriculture with respect to being more productive, more likely to work in modern agricultural jobs or jobs at higher stages of the value chain. In this context, migration may still be utilized by youth in order to access land to facilitate entry into more commercialized agricultural self-employment.

### 2.3 Data

We use the Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA) in Ethiopia (2011–12, 2013–14), Malawi (2010–11, 2012–13), Nigeria (2010–11, 2012–13), and Tanzania (2008–19, 2010–11) (World Bank 2016a, b, c, d) to construct an individual dataset of youth ages 15–34 for descriptive statistics on youth migration between baseline and endline per country. Approximately, 5,364 observations in Ethiopia, 4,060 in Malawi, 7,383 in Nigeria, and 4,618 in Tanzania are used to create the migration statistics. Otherwise, when we focus on rural non-migrants, rural–rural migrants, and rural–urban migrants, we have 4,732 observations in Ethiopia, 2,960 in Malawi, 5,179 in Nigeria, and 3,101 in Tanzania, respectively. The analyses using the employment and income outcomes draw from smaller youth samples since we are missing individual responses for those outcomes over time.

We define a person as a migrant if he was a member of the household at baseline and departed the household in the follow-up survey. Different instruments were used to detect migration in the surveys. For the Malawi and Tanzania surveys, the migration definition is based on the diligent tracking of split-off households. In Ethiopia and Nigeria, we rely on information reported by the proxy respondent in the follow-up survey on the whereabouts of each household member from

the baseline roster. Since the baseline and follow-up rounds are two years apart, our measure of migration is over a two-year period and therefore considered a permanent move. However, a key limitation in our interpretation of migration across regions will be our inability to disentangle the variation in mobility that stems from differences in contexts across countries from the variation in mobility due to measurement differences associated with the use of different survey instruments and interview times across countries.

We additionally define the migrant by origin and destination using rural and urban classifications established in the surveys: rural–rural, rural–urban, urban–urban, urban–rural. We are unable to compute representative urban–urban and urban–rural migration rates for Ethiopia, because the baseline survey did not sample large towns until the second round and therefore are omitted from the sample. The definition of urban in Ethiopia typically consists of small (population less than 10,000) and large (population greater than 10,000) towns. Thus, the urban–urban and urban–rural migration rates constructed in this chapter reflect migration within and to smaller towns rather than within and to metropolitan areas.

Detailed information on individual employment was extrapolated from the wage, agricultural on–farm labour, and non-agricultural enterprise modules of the surveys. These modules document any engagement in wage or self-employment activities over a 12-month period. We focus on labour participation rather than hours supplied. In our descriptive statistics, a youth is considered to have engaged in a specific activity irrespective of the number of hours reported. This allows us to avoid measurement issues associated with missing hours in the supplied values, but of course fails to account for differences in partial versus full employment. For the purpose of the analysis, we define employment portfolios into four categories: exclusively agriculture, exclusively non-agriculture, mixed agriculture and non-agriculture, and student. For brevity, an individual who was actively a student is automatically placed in the last category, despite evidence of engagement in farm or off-farm activities.

One of the aims of this piece is to evaluate whether relocation offers youth opportunities to diversify employment or improve their agricultural production prospects. This requires knowledge of employment of migrants and non-migrants over time. Since tracking at the individual level was only performed in Malawi and Tanzania, detailed descriptive statistics on employment and income patterns by migration status are only available for these countries.

We compute income by source for each household to illustrate qualitatively whether migration improved the prospects of youths (ages 15–34). The recall period for income dates 12 months prior to the interview for the Tanzania surveys and 12–18 months prior to the interview for the Malawi survey. Incomes are winsorized at the 5 per cent level to remove influences from outliers and measurement error on descriptive statistics.

## 2.4 Results

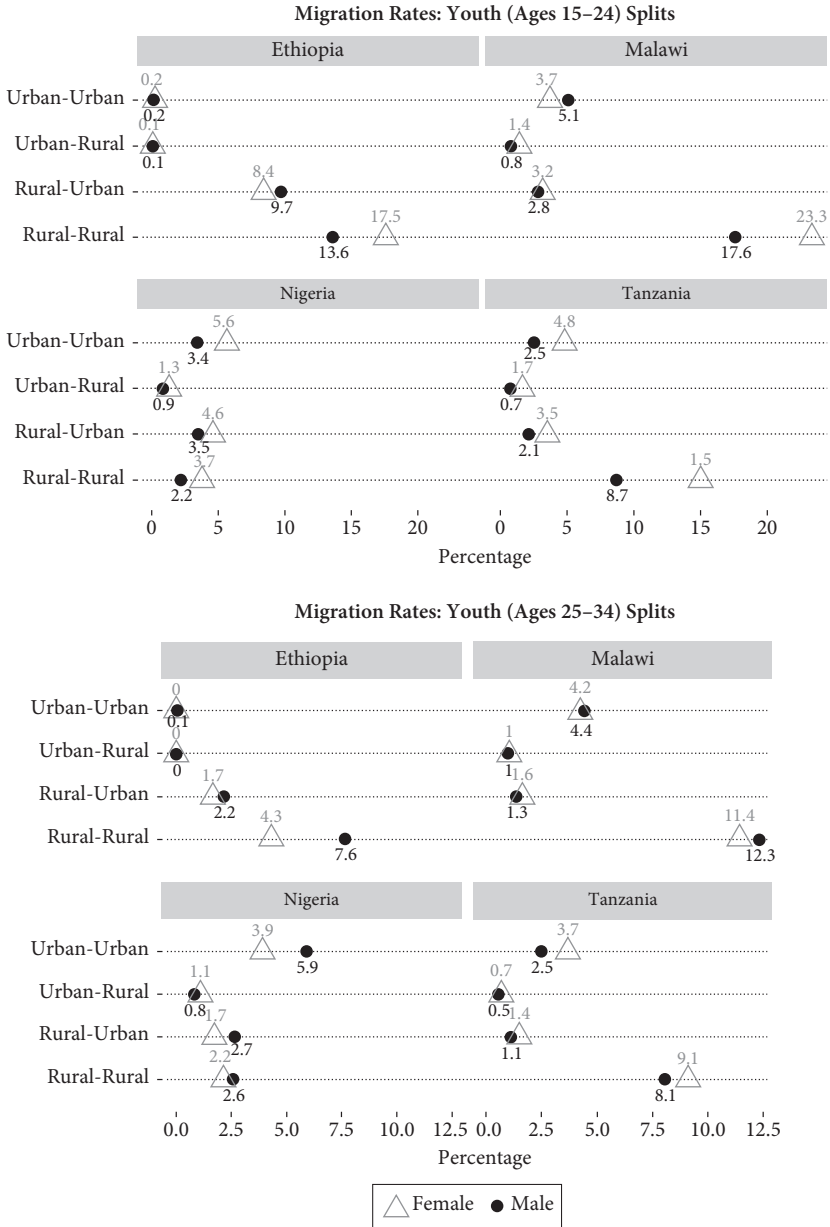
### 2.4.1 Youth Migration

Figure 2.1 provides the youth migration rates by country and gender for two cohorts: 15–24 and 25–34. We focus on those splitting from their household, originating from rural areas given the premise of the book (see Figure 2.2).<sup>1</sup> The percentage of young men in rural areas migrating to other rural areas is as high as 13.6 per cent in Ethiopia and 17.6 per cent in Malawi. Rural–rural migration rates for women in these two countries are slightly greater than the rates of young men at 17.5 per cent and 23.3 per cent. Rural–urban migration rates are considerably lower. The highest migration to cities occurs among Ethiopian young men (9.7 per cent) and women (8.4 per cent). The remaining countries have rural–urban migration rates within the range of 2 to 5 per cent. Young adults (25–34) are less mobile than the younger cohort, particularly in Ethiopia and Malawi.

Figure 2.3 displays the primary motivation for youth migration. Interestingly, the rates of rural youth claiming to move to other rural areas for employment reasons are quite similar across cohorts with the exception of Malawi. For example, 13.7 per cent of 15–24 year old migrants report moving for employment in Nigeria compared to 12.6 per cent of 25–34 year old migrants. The distinctions in reasons for moving are more pronounced among classes of rural–urban migration. The most drastic example takes place in Ethiopia. Approximately, 31.9 per cent of 15–24 year olds state having moved for work, while 55.4 per cent indicate having moved for education. This can be compared to 49.6 per cent of rural–urban young adult migrants reporting having moved for employment and a mere 12.5 per cent for education.

We further compare the distances travelled by migration pattern (not shown here). The median distance that young (15–24) rural–rural male (female) migrants travel is 1.4 (1.4) kilometres in Malawi, and 0.2 (1.6) kilometres in Tanzania. These figures can be compared to those obtained for rural–urban male (female) migrants who undergo median travel distances of 68.1 (59.8) kilometres in Malawi, and 90.3 (54.5) kilometres in Tanzania. These figures are qualitatively comparable for the older youth cohort. For example, the median distance that mature youth (25–34) rural–rural male (female) migrants travel is 1.2 (0.3) kilometres in Malawi, and 0.3 (3.4) kilometres in Tanzania. These figures can be compared to those obtained for rural–urban male (female) migrants who undergo median travel distances of 74.8 (25.2) kilometres in Malawi and 61.9 (37.7) kilometres in Tanzania. Workers

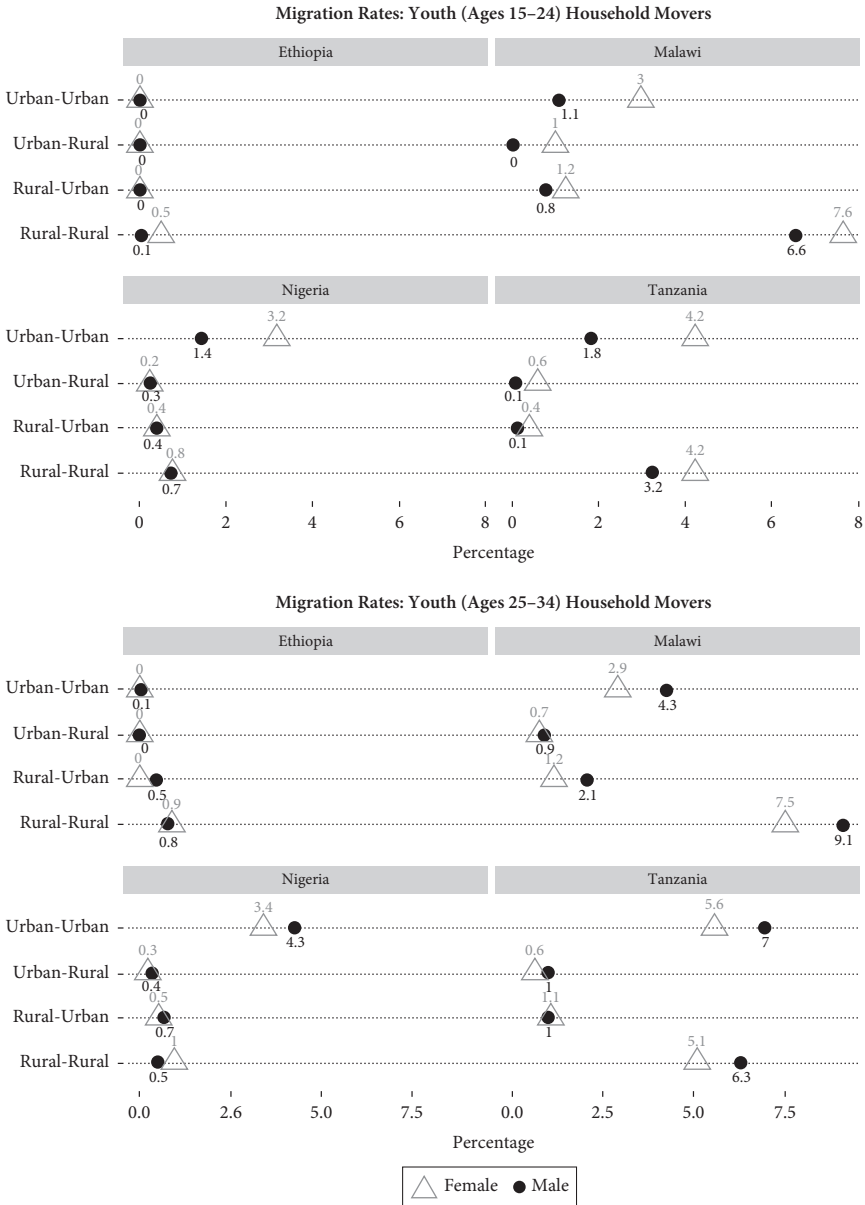
<sup>1</sup> Figure 2.2 illustrates youth migration rates for those departing with the entire household. Rates of migration are much lower, although still noteworthy in size for rural populations in Malawi and Tanzania.



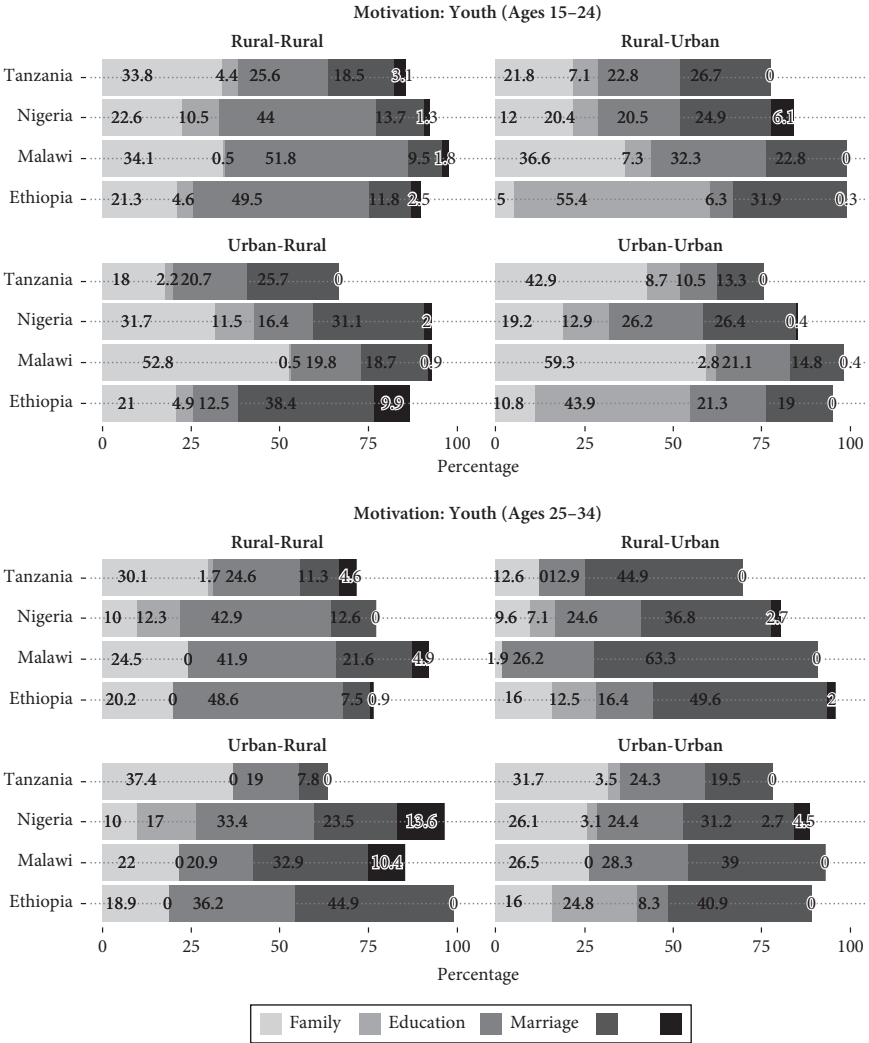
**Figure 2.1.** Youth migration rates

Note: Sampling weights used to calculate statistics





**Figure 2.2.** Migration rates of youth moving with their entire household  
*Note:* Sampling weights used to calculate statistics



**Figure 2.3.** Motivation for youth migration

*Note:* Other motivation category omitted. Sampling weights used to calculate statistics

moving to urban areas are not only more likely to claim that they are moving for employment but they are travelling greater distances to fulfil their objectives.

One might expect differences across cohorts within migration patterns due to variations in life cycle stages. For example, the concept of ‘waithood’ refers to African youth delaying marriage and other milestones due to unemployment (Honwana 2012). However, what is particularly interesting is that the distribution of employment migrants is quite consistent across cohorts within the rural–rural migrant sample and markedly distinct across cohorts within the rural–urban migrant sample.

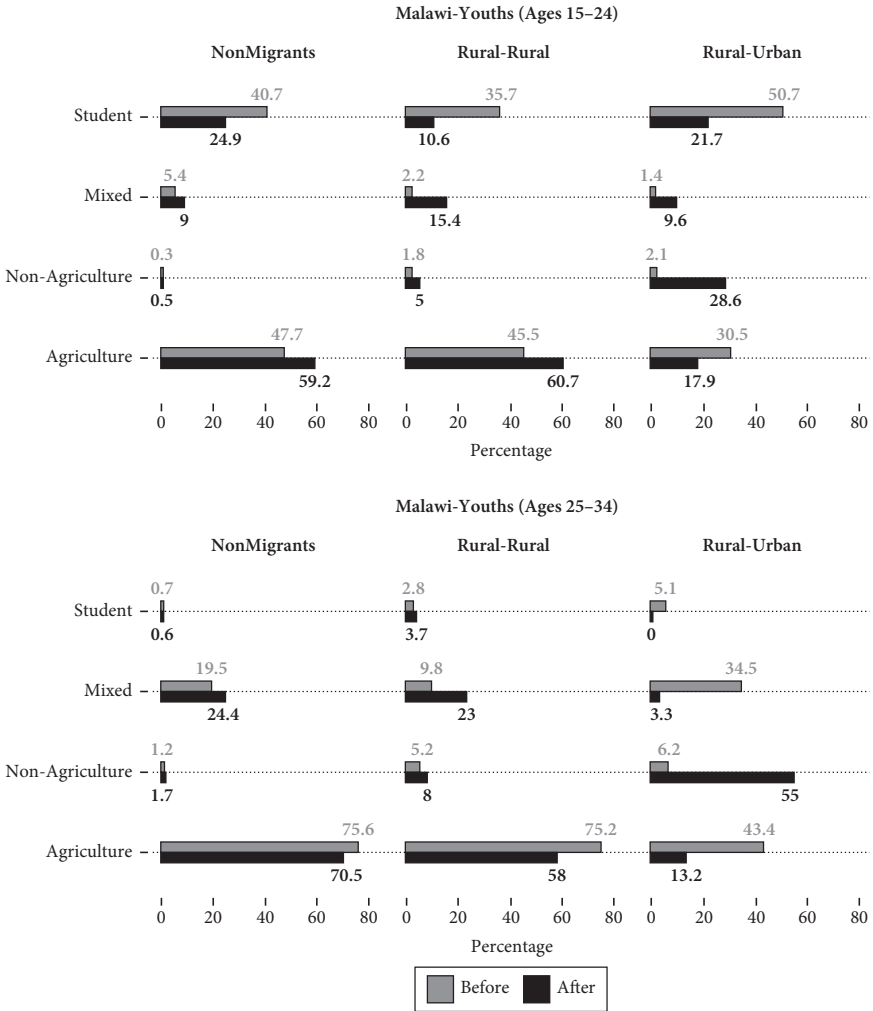
A major portion of rural–urban migration may comprise industrious rural youth looking for auxiliary employment opportunities, or, as in Ethiopia, moving to attend secondary and tertiary schools unavailable in their rural locales with the possibility of remaining at their destination for employment upon completion of their degrees.

#### 2.4.2 Evolution of Sectoral Employment among Tracked Migrant and Non-migrant Rural Youth: Malawi and Tanzania Case Studies

As standard panel surveys track the developments of non-migrants, the omission of rural–urban migrants from surveys may be responsible for reporting bias in rural youth employment trends. We next compare the employment patterns of migrants and non-migrants by rural youth cohort starting first with available data in Malawi (Figure 2.4). The majority of rural–urban migrants (aged 15–24) were students at baseline (50.7 per cent). Slightly fewer rural–urban migrants were students following their move (21.7 per cent of migrants compared to 24.9 per cent of non-migrants). All migrants and non-migrants engaged in similar levels of mixed sector employment (9.6 per cent of youth rural–urban migrants and 9.0 per cent of non-migrants) in the follow-up round. While the trend for non-migrants in the youth cohort was an increase of 11.5 per cent working exclusively in the agricultural sector after the baseline, 12.6 per cent of youth migrants left the agricultural sector upon arrival in urban areas. Furthermore, the percentage of rural–urban migrant youth exclusively working in non-agriculture increased from 2.1 per cent to 28.6 per cent.

The young adult cohort employment statistics suggest similar trends as observed for the youth cohort. At baseline, a more substantive portion of rural–urban migrants begin in mixed livelihood strategies (34.5 per cent compared to 19.5 per cent), and much fewer in agriculture (43.4 per cent compared to 75.6 per cent). The rural–urban migrants then shift exclusively to non-agriculture, when only 6.2 per cent of rural–urban migrants were in this category of employment before the move. By the follow up survey, 55.0 per cent of rural–urban migrants worked exclusively in non-agriculture compared to 1.7 per cent of non-migrants within the same age group.

The statistics in Figure 2.4 suggest rural–rural migration enables diversification more than entry into the non-agricultural labour market. For the youngest cohort, exclusive employment in agriculture at baseline is similar among stayers and movers to other rural areas (47.7 and 45.5 per cent, respectively). Yet, the percentage of rural–rural migrants working only in the agricultural sector increases to 60.7 per cent, while for non-migrants the increase is slightly lower (59.2 per cent). Although fewer rural–rural migrants engage in mixed sectoral employment than non-migrants (2.2 per cent compared to 5.4 per cent),



**Figure 2.4.** Employment patterns for rural youth in Malawi

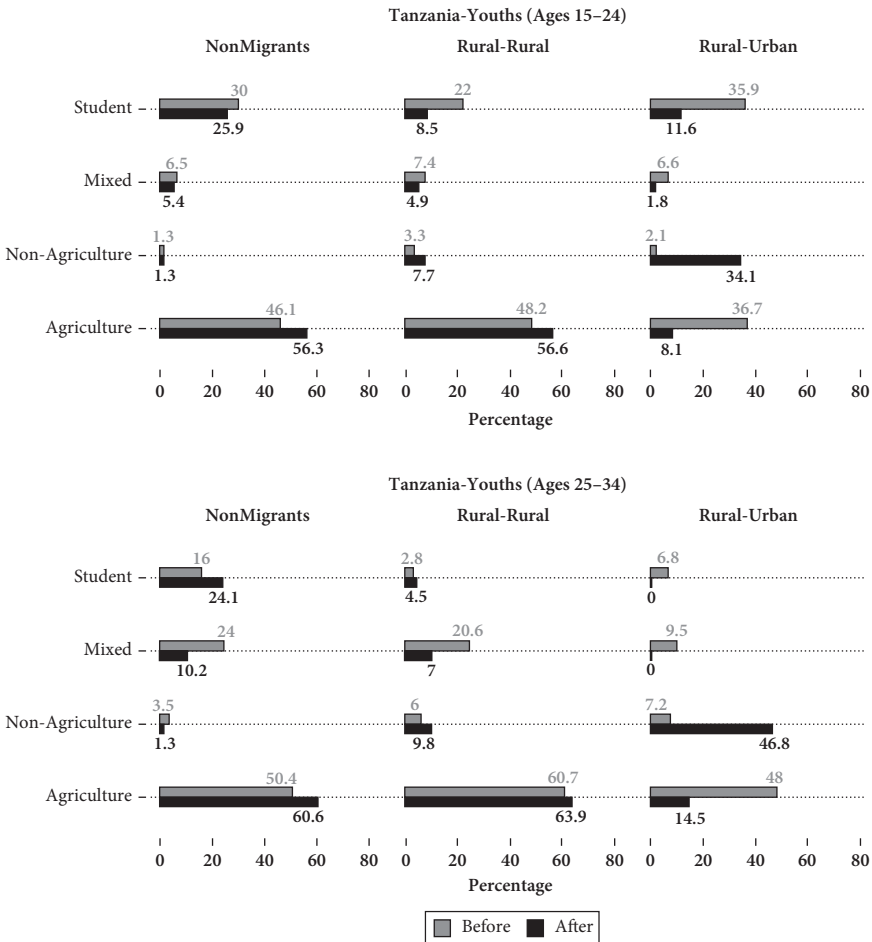
*Note:* Unemployment category omitted. Sampling weights used to calculate statistics.

a remarkable percentage of rural–rural migrants diversify in the follow-up round (15.4 per cent compared to 9.0 per cent). The patterns of diversification among the older cohort of rural–rural migrants are quite similar, with the exception that there was an overall decreasing trend in agricultural labour market participation for 25–34 year olds irrespective of mobility in the follow-up round. All rural–rural migrant cohorts are more likely to participate in the non-agricultural sector but at a more modest level than their rural–urban counterparts.

The findings in Malawi offer the hypothesis that migration may facilitate entry into labour markets auxiliary to agricultural wage and self-employment. Young migrants diversify out of agriculture through partial employment in the

non-agricultural sector. However, it appears that rural–urban migration in Malawi offers a more significant fraction of youth to gradually progress out of agricultural employment into exclusive non-agricultural employment.

We next turn to the evolution of employment trends for rural youth in Tanzania (Figure 2.5). The youth migrant employment trends are similar but more pronounced than witnessed in Malawi. Fewer rural–urban migrants than non-migrants were employed in the agricultural sector at baseline (36.7 and 46.1 per cent, respectively). By the follow-up round, 28.6 per cent of rural–urban migrants left the agricultural sector when the trend among rural youth was a 10.2 per cent increase in labor participation in the agricultural sector. Although slightly more rural–urban migrants were in the non-agricultural sector at baseline (2.1 per cent compared to 1.3 per cent), their rate of engagement augmented to 34.1 per cent in the follow-up



**Figure 2.5.** Employment patterns for rural youth in Tanzania

Note: Unemployment category omitted. Sampling weights used to calculate statistics.

round compared to a status quo participation of this sector among non-migrants. The trends are quite similar for young adult rural–urban migrants.

In Tanzania, rural–rural migration did not have as much of a prolific impact on labour diversification as in Malawi in the follow-up round. Rather, rural–rural migration encouraged a greater percentage of youth and young adults to participate in exclusive agricultural employment. Similarly, the percentage of youth and young adults working in mixed livelihood strategies diminished from 7.4 per cent to 4.9 per cent and 20.6 per cent to 7.0 per cent, respectively. The growth in participation of exclusive non-agriculture employment almost compensates for the observed loss in mixed sectoral employment for the 15–24 (but not the 25–34) age cohort.

In summary, our case studies show that over the time period covered by the first two rounds of the Malawi and Tanzania panel surveys, migration to urban destinations offered opportunities for youths to enter the non-agricultural market. Rural–rural migration instead guaranteed prospects for diversification with smaller entry into the exclusive non-agricultural sector.

### 2.4.3 Shifts in Space and More Productive Occupations: Malawi and Tanzania Case Studies

As a first attempt to gauge whether moves are productive, we compare the change in the logarithm of household income per adults among youth originating from rural areas (15–34) and their non-migrant counterparts. Figure 2.6 illustrates the

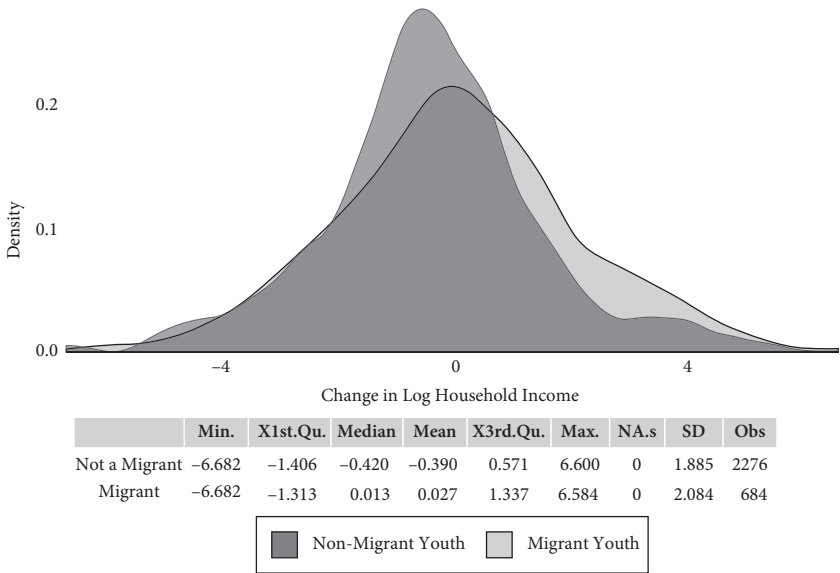


Figure 2.6. Change in income per adults by migration status in Malawi (ages 15–34)

distribution of changes in income which occurred in Malawi, where the dark gray- and light gray-shaded areas reflect the values for the non-migrants and migrants, respectively. On average, the sample of youth experienced losses over this time period. Yet, migrant youth income improved significantly (2.7 per cent) compared to the losses of non-migrant youth (39.0 per cent) according to a simple t statistic ( $p$ -value = 0.00). We further reject that the distribution of the change in income is statistically equivalent across the two samples using a Kolmogorov–Smirnov test ( $p$ -value = 0.00) (Smirnov 1933).<sup>2</sup>

We perform a similar exercise using information from the Tanzanian youth, leading to quite similar conclusions. In Figure 2.7, we observe that the average change in migrant youth income per adult increased 37.9 per cent relative to an increase of 21.4 per cent experienced by their rural counterparts. We cannot reject that the changes in income per adult on average are statistically different across the two samples (t test  $p$ -value = 0.16), but the distributional differences by migration status remain (Kolmogorov–Smirnov  $p$ -value = 0.00).

Income measures traditionally suffer from a considerable amount of measurement error, which may influence our ability to affirmatively associate migration with improvements in youth job prospects. To complement the above analysis,

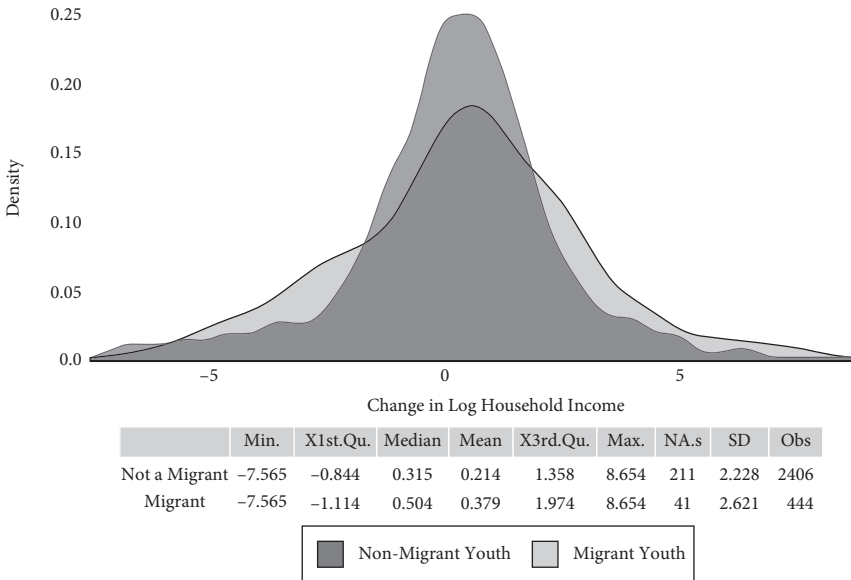


Figure 2.7. Change in income per adults by migration status in Tanzania (ages 15–34)

<sup>2</sup> We also conduct a sensitivity analysis by reflecting on comparisons of income per individuals (rather than the number of adults) in the household. The patterns are similar as previously observed. The change in income averages and distributions remain different across samples (t test  $p$ -value = 0.00; Kolmogorov–Smirnov  $p$ -value = 0.00).

we demonstrate whether migrants are more likely to move from presumably low-return agriculture to high-return nonfarm employment. This requires developing a typology similar to Bezu and Barrett (2012), categorizing the occupations of youth into low-return and high-return non-agricultural activities. We then show how the employment transitions between waves 1 and 2 vary by whether youth stayed in their baseline location, moved to a rural destination, or moved to an urban destination in the Malawi and Tanzania surveys.

Table 2.1 displays the employment transitions between waves by migration status in Malawi and Tanzania. In rural areas, 61.7 per cent and 53.6 per cent of the youth non-migrant population remained engaged in agricultural employment throughout the two waves in Malawi and Tanzania, respectively. These figures are comparable to the employment rates of the adult non-migrant population, which we also include in Table 2.1 as a reference but leave out of the discussion hereafter. The figures are only slightly reduced for the rural–rural migrant population (49.5 per cent in Malawi and 40.0 per cent in Tanzania). In short, the majority of the youth population who remains or moves within rural areas stays in the agricultural sector.

In both countries, rural–urban and rural–rural migration offer more possibilities for youth to engage in high-return employment which confers the observed positive income change associated with mobility. A greater percentage of rural–urban migrants (17.3 per cent in Malawi and 15.5 per cent in Tanzania) and rural–rural migrants (13.7 per cent in Malawi and 10.1 in Tanzania) specialize in high-return wage/enterprise activities compared to rural non-migrants (7.6 per cent in Malawi and 6.8 per cent in Tanzania). Further, 22.2 (19.6) per cent of rural–urban migrants and 15.3 (8.4) per cent of rural–rural migrants in Malawi (Tanzania) transition out of agriculture compared to 10.2 (4.8) per cent of rural non-migrants.

Relocation also offers the unemployed additional job opportunities in low- and high-return non-agricultural activities. Less than 1 per cent of rural non-migrants were unemployed and obtained a low-return or high-return wage or enterprise job in the later round in Malawi (Tanzania) relative to 7.5 (7.7) per cent of rural–urban migrants and 2.8 (2.2) per cent of rural–rural migrants. While the probability of obtaining a job in a high-return activity for the unemployed is marked higher for youth moving to urban areas, such movement comes with an additional risk of unemployment. Approximately, 4.6 and 12.7 per cent of rural–urban migrants were unemployed in Malawi and Tanzania, respectively, in both rounds, compared to and 1.7 and 4.0 per cent of rural–rural migrants and 0.8 and 3.3 per cent of rural non-migrants. However, the difference in the proportions of migrant youth that remain unemployed in both rounds (relative to non-migrant rural youth) is only statistically significant when comparing rural–rural migrant employment rates with those of rural non-migrants.



**Table 2.1.** Employment rates by migration status

	Tanzania										
	Malawi			Tanzania							
	Nonmigrant (35–60)	Nonmigrant (15–34)	migrant	Rural-rural	Nonmigrant (35–60)	Nonmigrant (15–34)	migrant	Rural-urban	Nonmigrant	migrant	Rural-rural
Employment Transitions			migrant	migrant			migrant	migrant			migrant
Agriculture to student	0.000	0.016	0.032*	0.007	0.003	0.015	0.013	0.010	0.010	0.010	0.010
Agriculture to unemployed	0.021	0.031	0.121**	0.055**	0.013	0.037	0.208***	0.120***	0.037	0.120***	0.120***
Agriculture to agriculture	0.617	0.617	0.172***	0.495***	0.627	0.536	0.097***	0.400***	0.536	0.400***	0.400***
Agriculture to LR wage or enterprise	0.046	0.056	0.178	0.062***	0.016	0.016	0.129	0.032**	0.016	0.032**	0.032**
Agriculture to HR wage or enterprise	0.080	0.046	0.044***	0.090	0.031	0.032	0.067	0.052	0.032	0.052	0.052
LR wage or enterprise to student	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.002*	0.001	0.002*	0.002*
LR wage or enterprise to unemployed	0.000	0.001	0.000	0.000	0.006	0.005	0.019	0.011	0.005	0.019	0.011
LR wage or enterprise to agriculture	0.030	0.030	0.011*	0.018	0.115	0.075	0.000	0.062***	0.075	0.000	0.062***
LR wage or enterprise to LR wage or enterprise	0.026	0.022	0.035**	0.009	0.008	0.010	0.022	0.008	0.010	0.022	0.008
LR wage or enterprise to HR wage or enterprise	0.016	0.004	0.000	0.009***	0.016	0.009	0.031	0.010	0.009	0.031	0.010
HR wage or enterprise to student	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.001	0.000	0.000
HR wage or enterprise to unemployed	0.004	0.002	0.029	0.003	0.002	0.002	0.000	0.007***	0.002	0.000	0.007***
HR wage or enterprise to agriculture	0.061	0.031	0.000*	0.016***	0.062	0.041	0.000*	0.021***	0.041	0.000*	0.021***
HR wage or enterprise to LR wage or enterprise	0.008	0.006	0.009	0.008	0.005	0.006	0.000	0.003***	0.006	0.000	0.003***

*Continued*

**Table 2.1.** Continued

	Malawi			Tanzania		
	Nonmigrant (35–60)	Nonmigrant (15–34)	Rural-urban Rural-rural	Nonmigrant (35–60)	Nonmigrant (15–34)	Rural-urban Rural-rural
HR wage or enterprise to HR wage or enterprise	0.070	0.030	0.061	0.024	0.038	0.014
Unemployed to student	0.000	0.004	0.000	0.001**	0.000	0.000**
Unemployed to unemployed	0.007	0.008	0.046	0.017*	0.012	0.040**
Unemployed to agriculture	0.012	0.029	0.020**	0.079	0.029	0.132
Unemployed to LR wage or enterprise	0.000	0.003	0.023*	0.010	0.001	0.005
Unemployed to HR wage or enterprise	0.001	0.004	0.052*	0.018*	0.004	0.017*
Student to student	0.000	0.012	0.034**	0.005	0.003	0.001
Student to unemployed	0.000	0.007	0.042	0.005	0.000	0.013**
Student to agriculture	0.000	0.043	0.038	0.052	0.004	0.028***
Student to LR wage or enterprise	0.000	0.000	0.038**	0.012*	0.000	0.003
Student to HR wage or enterprise	0.000	0.002	0.016	0.005	0.001	0.008*
Individuals	1353	2276	84	600	1886	388
					2612	96

Notes: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . T statistics test the difference between the proportion of migrants and non-migrants in each employment transition category for the consolidated 15–34 youth group. Rural–rural and rural–urban migrants are 15–34 years old.

## 2.5 Conclusion

The LSMS–ISA surveys are one of the few data collection efforts in Africa that enable researchers to view a more detailed snapshot of youth migration and employment transitions. We find young individuals, ages 15 to 24, are highly mobile in all four countries. The individual tracking protocols performed in the Malawi and Tanzania surveys allowed us to monitor transitions in income and employment between migrant and non-migrant youth samples. This analysis suggests migration is potentially welfare-enhancing both in terms of income improvements and employment prospects particularly for those migrants who were previously unemployed.

One thing to note is that, like any decision, youth face different tradeoffs when contemplating where to relocate. Rural–urban migration facilitates movement out of agriculture with a greater tendency towards high-return activities in Malawi and Tanzania, yet in absolute numbers this affects a small portion of youth. Rural–rural youth migration, in contrast, attracts a greater percentage of youth. It may be the most formative mobility pattern in the transformation process by encouraging youth to diversify from exclusive employment in the agricultural sector.

This chapter focuses exclusively on the migration and employment patterns of youth individuals. However, these patterns likely arise from decision-making behaviour at the household level. Of future interest will be to decipher the extent households spatially allocate young members to access income for agricultural intensification or farm expansion purposes, and further how these household decisions might be beneficial or harmful to youth in the long term. Understanding such household dynamics requires knowledge of whether youth migration patterns are driven by a household wealth effect, for example, from increases in investments (Deininger et al. 2008), or a substitution effect between youth labour and investments. These complementarities are important as the former (not the latter) has the potential to be transformative for youth.

## References

- Barrett, C., M. F. Bellemare, and J. Y. Hou. 2010. Reconsidering conventional explanations of the inverse productivity-size relationship. *World Development* 38 (1): 88–97.
- Beegle, K., J. De Weerd, and S. Dercon. 2006. Orphanhood and the long-run impact on children. *American Journal of Agricultural Economics* 88 (5): 1266–72.
- Beegle, K., D. Filmer, A. Stokes, and L. Tiererova. 2010. Orphanhood and the living arrangements of children in Sub-Saharan Africa. *World Development* 38 (12): 1727–46.
- Bellemare, M. F. 2013. The productivity impacts of formal and informal land rights: Evidence from Madagascar. *Land Economics* 89 (2): 272–90.

- Bezu, S., and C. Barrett. 2012. Employment dynamics in the rural nonfarm sector in Ethiopia: Do the poor have time on their side? *Journal of Development Studies* 48 (9): 1223–40.
- Bezu, S., and S. Holden. 2014. Are rural youth in Ethiopia abandoning agriculture? *World Development* 64: 259–72.
- Bustos, P., B. Caprettini, and J. Ponticelli. 2016. Agricultural productivity and structural transformation. Evidence from Brazil. *American Economic Review* 106 (6): 1320–65.
- Carletto, C., S. Savastano, and A. Zezza. 2013. Fact or artifact: The impact of measurement errors on the farm size–productivity relationship. *Journal of Development Economics* 103: 254–61.
- Davis, B., S. Di Giuseppe, and A. Zezza. 2014. Income diversification patterns in rural Sub-Saharan Africa: Reassessing the evidence. Policy Research Working Paper 7108: Washington, DC, U.S.A.: World Bank.
- de Brauw, A., V. Mueller, and H. K. Lee. 2014. The role of rural-urban migration in the structural transformation of Sub-Saharan Africa. *World Development* 10 (63), 33–42.
- de Brauw, A., V. Mueller, and T. Woldehanna. 2013. Motives to remit: Evidence from tracked internal migrants in Ethiopia. *World Development* 50: 13–23.
- De Vreyer, P., and F. Roubaud. 2013. *Urban labor markets in Sub-Saharan Africa*. Washington, DC, U.S.A.: World Bank.
- Deininger, K., D. Ali, S. Holden, and J. Zevenbergen. 2008. Rural land certification in Ethiopia: Process, initial impact, and implications for other African countries. *World Development* 36 (10): 1786–812.
- Deininger, K., F. Xia, and S. Savastano. 2015. *Smallholders' land ownership and access in Sub-Saharan Africa: A new landscape?* Policy Research Working Paper 7285. Washington, DC, U.S.A.: World Bank.
- Dillon, B., and C. B. Barrett. 2014. Agricultural factor markets in Sub-Saharan Africa: An updated view with formal tests for market failure. *Food Policy* 67: 64–77.
- Elder, S., and K. S. Kone. 2014. *Labour market transitions of young women and men in Sub-Saharan Africa*. Work4Youth, No. 9. Geneva, Switzerland: International Labour Office.
- Filmer, D., and L. Fox. 2014. *Youth employment in Sub-Saharan Africa*. Washington, DC, U.S.A.: World Bank.
- Fox, L., and T. P. Sohnesen. 2012. *Household enterprises in Sub-Saharan Africa: Why they matter for growth, jobs, and livelihoods*. Policy Research Working Paper 6184. Washington, DC, U.S.A.: World Bank.
- Garcia, M., and J. Fares. 2008. *Youth in Africa's labor market*. Washington, DC, U.S.A.: World Bank.
- Grimm, M., P. Knorringa, and J. Lay. 2012. Constrained gazelles: High potentials in West Africa's informal economy. *World Development* 40 (7): 1352–68.
- Harris, J. R., and M. Todaro. 1970. Migration, unemployment and development: A two-sector analysis. *American Economic Review* 60 (1), 126–42.

- Hazell, P. B. and S. Haggblade. 1990. *Rural–urban growth linkages in India*. Working Paper Series 430. Washington, DC: World Bank.
- Headey, D., D. Bezemer, and P. Hazell. 2010. Agricultural employment trends in Asia and Africa: Too fast or too slow? *World Bank Research Observer* 25, 57–89.
- Headey, D., and T. S. Jayne. 2014. Adaptation to land constraints: Is Africa different? *Food Policy* 48: 18–33.
- Headey, D., M. Dereje, and A. S. Taffesse. 2014. Land constraints and agricultural intensification in Ethiopia: A village-level analysis of high-potential areas. *Food Policy* 48: 129–41.
- Honwana, A. M. 2012. *The time of youth: Work, social change, and politics in Africa*. London, U.K.: Kumarian Press.
- Jayne, T. S., D. Mather, and E. Mghenyi. 2010. Principal challenges confronting smallholder agriculture in Sub-Saharan Africa. *World Development* 38 (10): 1384–1398.
- Jedwab, R., and D. Vollrath. 2015. Urbanization without growth in historical perspective. *Explorations in Economic History* 58, 1–21.
- Jones, S., and F. Tarp. 2012. *Jobs and welfare in Mozambique*. WIDER Working Paper 2013/045. Copenhagen, Denmark: UNU-WIDER.
- Larson, D. F., K. Otsuka, T. Matsumoto, and T. Kilic. 2014. Should African rural development strategies depend on smallholder farms? An exploration of the inverse-productivity hypothesis. *Agricultural Economics* 45 (3): 355–67.
- McCullough, E. B. 2017. Labor productivity and employment gaps in Sub-Saharan Africa. *Food Policy* 67: 133–52.
- Minot, N., and T. Benson. 2009. *Fertilizer subsidies in Africa: Are vouchers the answer?* Issue Brief 60. Washington, DC, U.S.A.: International Food Policy Research Institute.
- Muyanga, M., and T. S. Jayne. 2014. Effects of rising rural population density on smallholder agriculture in Kenya. *Food Policy* 48: 98–13.
- Nagler, P., and W. Naudé. 2014. *Non-farm enterprises in rural Africa: New empirical evidence*. World Bank Policy Research Working Paper 7066: Washington, DC, U.S.A.: World Bank.
- Nin-Pratt, A., and L. McBride. 2014. Agricultural intensification in Ghana: Evaluating the optimist’s case for a Green Revolution. *Food Policy* 48, 153–167.
- Page, J. 2012. *Youth, jobs, and structural change: Confronting Africa’s ‘employment problem’*. African Development Bank Working Paper 155. Tunis, Tunisia: African Development Bank.
- Reardon, T. 1997. Using evidence of household income diversification to inform study of the rural nonfarm labor market in Africa. *World Development* 25 (5): 735–47.
- Sheahan, M., and C. B. Barrett. 2014. *Understanding the input landscape in Sub-Saharan Africa: Recent plot, household, and community-level agricultural evidence*. Policy Research Working Paper 7014. Washington, DC, U.S.A.: World Bank.

- Shehu, E., and B. Nilsson. 2014. *Informal employment among youth: Evidence from 20 school-to-work transition surveys*. Work4Youth Publication Series 9. Geneva, Switzerland: International Labour Organisation.
- Smirnov, N. V. 1933. Estimate of deviation between empirical distribution functions in two independent samples. *Bulletin Moscow University* 2: 3–16.
- World Bank. 2016a. Living Standards Measurement Study—Integrated Surveys on Agriculture, Ethiopia. Washington, DC, U.S.A. <http://surveys.worldbank.org/lsms/programs/integrated-surveys-agriculture-ISA/ethiopia#bootstrap-panel--4>. Accessed October 19, 2017.
- World Bank. 2016b. Living Standards Measurement Study—Integrated Surveys on Agriculture, Malawi. Washington, DC, U.S.A. <http://surveys.worldbank.org/lsms/programs/integrated-surveys-agriculture-ISA/malawi#bootstrap-panel--4>. Accessed October 19, 2017.
- World Bank. 2016c. Living Standards Measurement Study—Integrated Surveys on Agriculture, Nigeria. Washington, DC, U.S.A. <http://surveys.worldbank.org/lsms/programs/integrated-surveys-agriculture-ISA/nigeria#bootstrap-panel--4>. Accessed October 19, 2017.
- World Bank. 2016d. Living Standards Measurement Study—Integrated Surveys on Agriculture, Tanzania. Washington, DC, U.S.A. <http://surveys.worldbank.org/lsms/programs/integrated-surveys-agriculture-ISA/tanzania#bootstrap-panel--4>. Accessed October 19, 2017.