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A SPATIAL ANALYSIS OF YOUTH LIVELIHOODS AND RURAL TRANSFORMATION IN GHANA

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Ghana's population is becoming younger and increasingly urbanized – by 2010, over half the population lived in urban settlements of more than 5,000 people – raising concerns among policy makers regarding the location and types of jobs required to employ the youth. The slow creation of formal urban jobs has particularly strong implications for young people entering the labor force: they are more educated than the older generation, with greater aspirations for non-farm employment and urban lifestyles (Anyidoho, Leavy, and Asenso-Okyere 2012). Without rapid industrialization to create more formal manufacturing and other non-agricultural jobs, youth in Ghana who leave the agricultural sector are increasingly likely to resort to informal services in both rural and urban areas. While much youth-related research has focused on changes in youth employment and livelihoods through rural-urban migration, a recent IFPRI Discussion Paper focuses on youth in the rural non-farm economy (Diao et al. 2017).

SHIFTING AWAY FROM AGRICULTURE AMONG RURAL YOUTH-HEADED HOUSEHOLDS

Data from the Population and Housing Census (2000 and 2010) and the Ghana Living Standards Survey 2005/06 and 2012/13 (GLSS 5 and GLSS 6) show that there has been a significant shift in rural employment patterns, highlighted by a significant exit from agriculture. While this trend occurs throughout rural Ghana, it is much more pronounced for youth aged 15 to 34 years – both as individuals and heads of households, and in the more urbanized south. Nationally, while the total share of rural households engaged in agriculture fell from 56.9 percent in 2000 to 51.1 percent in 2010, the share for rural youth-headed households plunged from 53.8 percent to 42.5 percent. The exit of rural households from agriculture corresponds to an increasing share of households with primary employment exclusively in the rural non-farm economy. Again, this shift is much larger for youth-headed rural households, with the share rising from 22.6 percent to 36.7 percent between 2000 and 2010, increasing by 14.1 percentage points, compared to an increase of 9.1 percentage points from 15.9 to 25.0 percent among all rural households (Table 1).

Participation in rural non-farm employment is much more pronounced in the south (largely corresponding to the forest and coastal zones) than in the north (largely corresponding to the transition and savanna zones) and is much higher in rural areas closer to cities. This is intuitive, due to the employment, market demand, and agriculture-consumption linkages generated by the development of cities.

We look at the rural areas of districts with cities of different sizes and create seven district groups accordingly based on the size of a district's largest city in both the north and south, as shown in Figure 1. The results in Table 1 show that youth are exiting agriculture faster than other adults in all district groups.

Table 1: Changes in agricultural and non-agricultural employment between 2000 and 2010 for all rural households and youth-headed rural households, percentage shares

	North			South		
	Agri-culture only	Non-agri-culture only	Agri-culture & non-agri-culture mixed	Agri-culture only	Non-agri-culture only	Agri-culture & non-agri-culture mixed
Rural Households						
Big city districts	-	-	-	-18.7	23.8	-5.7
2nd tier city dstrcts	-16.1	16.7	0.1	-23.4	27.3	-4.7
3rd tier city dstrcts	5.5	3.3	-1.3	-10.7	13.0	-1.4
No city districts	4.9	2.3	-0.4	-8.1	9.1	-0.9
Total	3.8	3.3	-0.6	-9.7	11.3	-1.3
Both North & South	-5.8	9.1	-1.1			
Rural Youth-Headed Households						
Big city districts	-	-	-	-18.8	22.6	-5.2
2nd tier city dstrcts	-24.8	22.9	-2.6	-21.3	25.9	-7.0
3rd tier city dstrcts	-1.5	8.2	-2.5	-16.4	18.9	-3.4
No city districts	0.6	5.2	-0.5	-12.7	13.9	-2.1
Total	-1.9	7.3	-1.2	-14.7	16.6	-2.8
Both North & South	-11.3	14.1	-2.4			

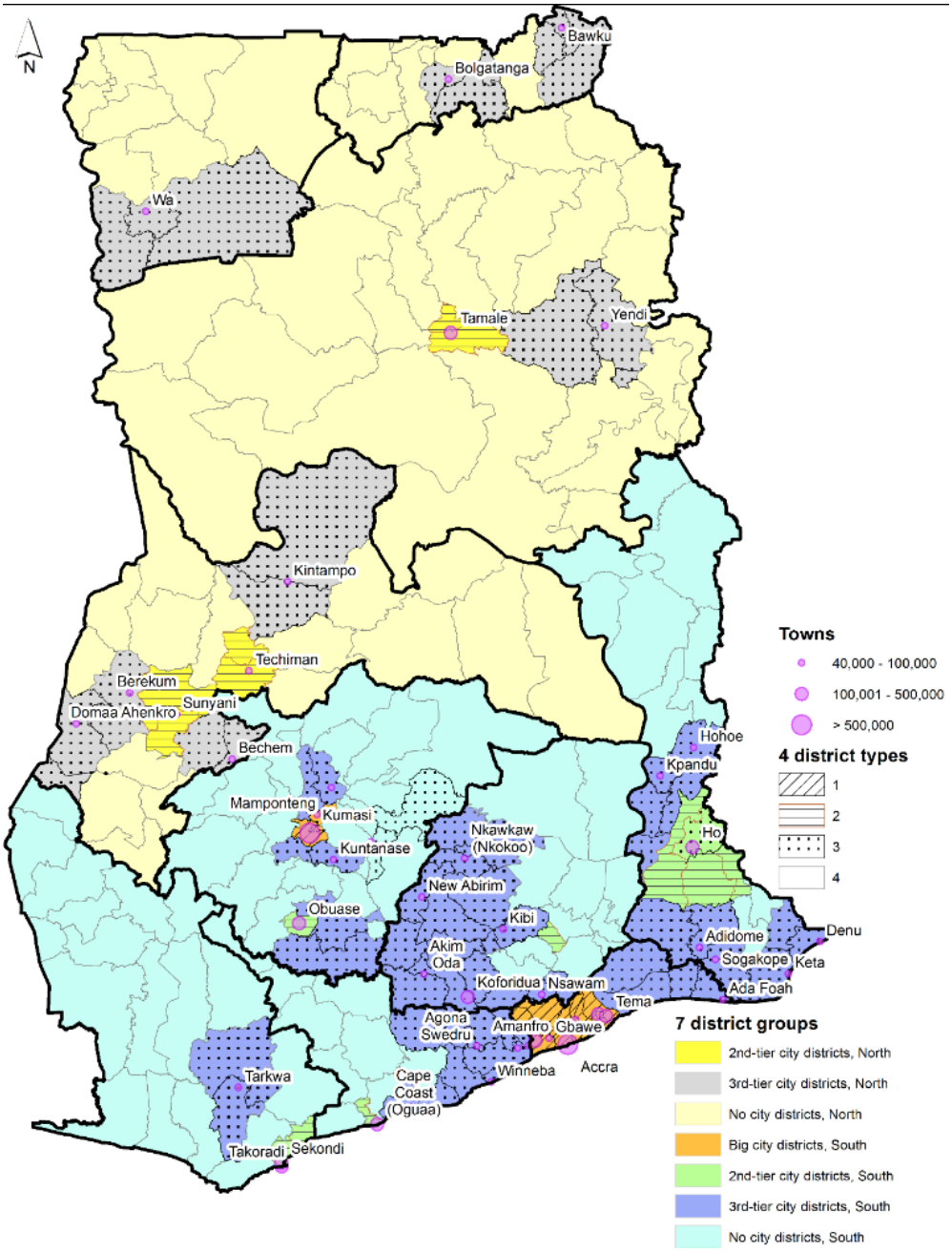
Note: The types of households are classified according to all members' primary employment. Households not reporting any primary employment are not reported in table; therefore, the sum of the three groups of households does not equal zero.
Source: 2000 and 2010 census data (GSS 2003; 2013)

Interestingly, these changes appear to involve shifting employment of the entire household rather than of individuals within the household working in both agriculture and non-agriculture. Table 1 shows that the share of households with both agricultural and non-agricultural employment changed modestly between 2000 and 2010.

PATTERNS OF RURAL NON-FARM EMPLOYMENT AMONG YOUTH

Most rural non-agricultural households engage in either informal manufacturing or informal trade. Rural manufacturing, much of which consists of small-scale food processing for the local market, appears more common in less urbanized districts that are more isolated from the national market. In contrast, informal trade is more prevalent in well-linked rural areas closer to cities. The census data indicate that in 2000 informal manufacturing made up 31.3 percent of rural youth non-agricultural employment, compared to 24.2 percent for other adults. However, the involvement of rural youth in informal manufacturing had declined by 2010, when the shares for youth and other adults engaged in informal manufacturing were both 24.8 percent. The shares of rural youth employed in informal trade were 30.7 percent and 33.7 percent in 2000 and 2010, respectively, while more rural other adults participated in trade

Figure 1: Four types of districts in Ghana, by levels of urbanization



Source: Map created by Mekamu Kedir Jemal (IFPRI), combining 2010 census data with other spatial data including cities and road networks. Spatial data of cities, towns and road network are from University of Ghana Remote Sensing & Geographic Information Systems website.

services than did rural youth in the more recent year (the share for other adults is 30.2 percent in 2000 and 40.9 percent in 2010). There is a trend among both youth and other adults of shifting away from employment in agriculture to rural services.

ARE THERE ANY EFFECTS ON AGRICULTURAL INTENSIFICATION?

Despite the rapid shift to the rural non-farm economy, over half of total rural households and around 40 percent of rural youth-headed households are still primarily engaged in agriculture. Urbanization and rural non-farm economic growth are often expected to have a major impact on agricultural intensification – the greater application in farming of labor and inputs per unit of area – and technology adoption, because of increases in population density, improvement in market access, and rising rural labor costs.

However, an econometric analysis using data pooled from the fifth and sixth rounds of the GLSS (2005/06 and 2012/13) on the use of agricultural inputs (chemical fertilizer, herbicides and insecticides, hired labor, and mechanization) presents an unclear picture of agricultural intensification in Ghana. The effect of being a youth-headed household on the probability of using fertilizer is only significant for 2013, suggesting that youth-headed households became more likely to adopt fertilizer in recent years only. Fertilizer adoption is also more common in the savannah zones of the north, where much larger declines in soil fertility have been experienced. However, it is important to note that Ghana introduced a fertilizer subsidy between the two survey years. There is a small but significant positive effect of being a youth-headed household on the probability of herbicide use and a more significant negative effect on hiring labor. The effect on mechanization use is insignificant. A similar lack of clear input use patterns also holds for all rural households.

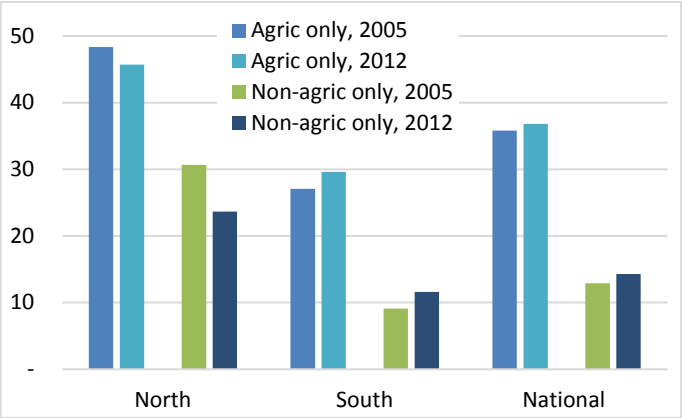
Overall, these results suggest that urbanization has not prompted significant agricultural intensification and technology adoption even among youth farmers, who could have been expected to be more exposed to these practices. It appears that youth, like other farmers, continue to face binding constraints to technology adoption. These constraints may include lack of availability of technologies, credit constraints, or factors limiting the profitability of the technologies.

CAN THE RURAL NON-FARM ECONOMY ACCELERATE POVERTY REDUCTION?

Quantitative analysis using survey data shows that rural households engaged in non-farm activities have higher chances of not being poor and achieving middle-class status (defined as per capita real income of at least $3.10 per day). Rural Ghana has experienced rapid poverty reduction and a growing middle class in recent years. Poverty declines have been more rapid, albeit from lower initial levels of poverty, for rural non-agricultural households than for rural agricultural households in both the North and the South, although poverty remains much higher in the North. Likewise, the rural middle class is growing throughout Ghana, but is more concentrated in the South and among non-agricultural households.

More specifically, the analysis shows that being a non-agricultural household increases the probability of not being poor by 6.6 percent and of becoming middle class by 11.8 percent. Being a youth-headed household also increases the probability of being non-poor by 10.2 percent and of being middle class by 6.1 percent. However, the results also suggest that this effect decreased over time between 2005/06 and 2012/13.

Figure 2: Rural poverty rates, by household type, 2005 and 2012, percent



Source: Authors' calculation using GLSS 5 and GLSS 6 data.

This is reflected in Figure 2, which shows that among youth-headed rural households, poverty fell in the North and fell much more rapidly among non-agricultural households, but poverty rates rose in the South for both agricultural and non-agricultural rural households. Notably, the poverty rate remains at a very low level for non-agricultural youth households in the South. Together, these results suggest that the rural non-farm economy is an important alternative or complement to agricultural growth for poverty reduction and improving rural livelihoods, especially in earlier stages of development, but is not a panacea for productive employment and, hence, further poverty reduction when the poverty level has reached low levels.

THINKING ABOUT POSSIBLE POLICIES

The exit of youth from agriculture appears closely linked to the development of the rural non-farm economy, particularly in rural areas surrounding cities. The rural non-farm economy is largely characterized by informal trade services and primary food processing. Such activities appear to be offering youth and other adults opportunities for employment and improved livelihoods, enabling many youth to fulfill their aspirations. However, in the meantime, these trends require agricultural policies that support the growth of the rural non-farm economy and strengthen its linkages to agriculture.

Policies to make agriculture attractive to youth should focus on making agriculture profitable. Although more youth appear to be exiting agriculture, most young people in the districts without larger cities still work in agriculture. With more rural youth becoming more educated, there is a greater prospect of young farmers adopting superior technologies and transforming agriculture. There is need for government policies and public investments that aim at promoting modern technology, including equipment and machinery, and agricultural commercialization to make agriculture more profitable and attractive to youth.

Informal non-agricultural activities in rural areas often have closer ties to agriculture than do formal activities, and their products and services are also mainly for satisfying local demand. In addition to rural–urban linkages that would create opportunities for agricultural growth and for rural employment through migration, it would be worthwhile to further explore agricultural growth opportunities through agricultural and non-agricultural geographic linkages in predominantly rural areas. Policies that strengthen the rural non-farm economy and its linkages to agriculture could directly increase the attractiveness of agriculture for youth. Deepening urbanization also means that labor, land, and other capital markets are likely to become more integrated between rural and urban areas. A territorial approach and related policies that focus on the integration of secondary cities and small towns with the rural economy deserve more attention so that for young people the diversification of rural livelihoods can become a viable alternative or complement to rural-urban migration.

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