

Youth Employment and Large-scale Agricultural Land Investments Nexus in Africa: Mixed Method Insights from Nigeria¹

Abstract

This study examines the nexus between youth employment and Large-scale Agricultural Land Investment (LALIs) in Africa using the case of Nigeria. This is germane given the understanding that the agricultural sector in many African countries has the potential of transforming local economies and creating employment opportunities. In addition, Africa has one of the most youthful populations of the world. In the literature, there is no consistent direction regarding the effects of LALIs on employment. While some studies found positive effect, others opined that LALIs could have deteriorating effect on employment. Thus, this study makes contribution to knowledge by carrying out a comparative analysis using youth in communities with and without LALIs. Mixed method of analysis (quantitative and qualitative) is engaged in the study. The quantitative data is estimated using the Difference-in-Difference and Propensity Score Matching techniques while the qualitative aspect is carried using key informant interviews and focus group discussion. The quantitative result show that the presence of LALIs in the communities leads to 1.24-percentage reduction in the amount of wage earned by the youth but was only significant at 10 percent. On the employment of youth conditioned upon the presence of LALIs in a community, the study finds a reduction in the number of hours worked by 6 hours, which was also only significant at 10 percent. From the qualitative analysis, the study finds varied wage levels across the sampled LALIs ranging between \$45.07 and \$281.69 per month with average working hours of 9 hours/day. The above raises concern on the type of employment provided by the LALIs. Hence, in an effort to curb youth unemployment and create good reward for labour, the LALIs recipient countries could promote better bargaining power for the host communities to ensure that employment of the people in the location where LALIs are situated is accorded due priority.

Keywords: Agricultural sector; Land investments; Employment; Households; Youth

JEL Classification: J43, O13, Q15, Q18

1. Introduction

This paper investigates youth employment in Nigeria in relation to how Large-scale Agricultural Land Investments (LALIs) offer employment for the youth where such LALIs are located. The analysis of this study relies on a comparison of communities with and without LALIs to understand the role of LALIs in job creation for the growing youth population in communities where such LALIs are located. Most of these LALIs target the agricultural sector. The agriculture sector is still the largest sector in most African countries. This sector is important to African countries as it has the potential of transforming local communities and individual lives, local economies as well as national economies and the environment, as the sector employs more than 65 percent of active labour force in Africa (African Development Bank-AfDB, 2014).

¹ Acknowledgement

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Agriculture provides great support for the African people ranging from food supply to medicinal herbs (Osabuohien, 2014; Aigbokhan & Ola, 2015). Africa has the largest reserves of arable land in the world (Wouterse *et al.*, 2011).

Focusing on the youth population is important considering that the Africa hosts about 19 percent of the global youth population (United Nations, 2015; Central Intelligence Agency-CIA, 2018). It is also projected that the youth population in Africa as a proportion of the total population is 75 percent with over 60 percent being younger than 25 years (Anyanwu, 2014; Hilson & Osei, 2014; AfDB, 2018). Therefore, the challenge of youth unemployment in Africa is a serious and sensitive issue due to other diverse reasons apart from the growing proportion in the population of the region. Some of these other diverse reasons include: first, the youthful population is usually active to social injustice and the feelings of neglect from benefits that they would have derived from natural/societal resources. Second, youthful population could be an endorsement for social vices and civil unrest if not managed well (Osabuohien *et al.*, forthcoming 2019a). High number of youth coupled with high youth unemployment and poor economic conditions could be a cartelist for civil tensions, war and misery. The Ugandan and the Sierra Leonean wars were among the prominent in African that was cited as being wars with the involvement of young combatants whose involvement was associated to unemployment (Bellows & Miguel, 2009; Vindevogel *et al.*, 2013; Osabuohien, *et al.*, 2019).

To reduce unemployment and enhance the creation of jobs, some African countries are taking steps to making the agricultural sector more attractive to induce youth participation through the provision of investments to actively engage the available lands for their enterprises (Elumelu 2017; Bluwstein *et al.*, 2018). The expectation is that with the presence of agricultural investments, there will be productive utilisation of the land and the spillover effect is that employment opportunities will be created either directly or through the utilisation of the support services of smaller businesses, among others (Engström & Hajdu, 2018). However, the extent to which these efforts yield sustainable outcomes depends on the impact of LALIs, as the investors require such lands for the location of their enterprise. For instance, studies (e.g. Barbanente & Aisbett 2016; Khadjavi *et al.*, 2017; Nolte & Ostermeier, 2017) found that LALIs have effect on the employment nature of communities with high LALIs rate than communities with low LALIs rate.

On average the land-poor have most to gain from agricultural investments, at least in terms of employment opportunities. In contrast, Stickler (2012) reveals that large-scale agricultural activities generate low employment and low earnings in Uganda; and that when people have smallholdings, they are worse off. Similarly, Brown (2012) reiterated that LALIs could deprive local people in the form of low labour retention as farming become mechanised. Aigbokhan & Ola (2015) indicated that LALIs are associated with high capital-intensive production with few labour demands. In the same vein, the produce may not be meant for host countries and host communities whereby it can create retail job activities for the local people. Okuro (2015) also noted that large-scale land acquisition might further jeopardise the welfare of the poor by depriving them of the safety net function that this type of land and water use fulfils. While that of Osabuohien *et al.* (2019) examined the effect of LALI on female labour outcome in comparison in Tanzania.

From the literature, there is inconsistency in the employment effect of LALIs. While some studies (Barbanente & Aisbett 2016; Khadjavi *et al.*, 2017) found positive effect, other studies (Brown, 2012; Stickler, 2012) maintained that LALIs has rather deteriorated the employment fortunes of the local people. As a thrust from the literature, to really appreciate the effect, there is the need to do comparative study of communities with and without LALIs and with a mixed method (quantitative and qualitative); hence, this paper provides recent insights to the debate. Thus, the question this paper seeks to answer includes; to what extent has the existence of LALIs delivered on employment creation to the households in host communities in Nigeria? How do labour hours in agricultural sector differ from non-agricultural sector for households in communities with (and without) LALIs? What is the nature of the employment provided by LALIs to individuals in host communities?

Nigeria presents an interesting context to study the relationship between LALI presence and youth employment for the following reasons. First, Nigeria is among the top 20 LALIs recipient countries worldwide, and among the top 10 in Africa. As other countries in Africa (e.g. Ethiopia, Ghana, Mozambique, South Sudan, Tanzania, and Zambia) that are LALI destinations have received much research attention, little has been done for Nigeria in terms of the LALIs implications (especially youth employment). Second, the youth unemployment rates in Nigeria are about 14 percent, and it is projected to see a youth population grow by 60 percent over the next 15 years (United Nations, 2015). As a result, there is the need to understand how LALI impacts this population group in Nigeria. Third, Nigeria is among the very few countries in Africa with nationally representative data like the Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS_ISA)², which contain relevant information on communities, households, and agricultural activities.

2. Theoretical Framework and Methodology

2.1 Theoretical Framework

Some theoretical approaches conclude that the type of land tenure system in place influences the effect of land investments. The Enclosed Model concludes that a shift from communal to private property will lead to the displacement of smallholders, which lowers their standard of living and job opportunities. The Evolutionary Theory had it that there is movement from communal to private property and that once land assumes a scarcity value, its demand increases, strengthening the land security for smallholders (Platteau, 1996). The welfare enhancing theory as espoused by Deininger *et al.* (2011) assumes that the property rights system is already well established and enforced. Thus, land investment can lead to mutually beneficial outcomes for both investors and smallholders or community members. The conceptual framework that this paper builds on is represented in Figure A1 [in the Appendix] where it is presupposed that some form of land tenure system do exist in the communities.

With this, LALIs could offer employment to the local people as LALIs have encouraged the inflow of land investors as a veritable tool for development based on agreed terms between the investors and land owners (Haberl *et al.*, 2009; Friis & Reenberg, 2010). In LALIs contracting,

²Other African countries with recent LSMS_ISA data (after 2010) include: Burkina Faso, Ethiopia, Malawi, Mali, Niger, Tanzania, and Uganda. More details are available online at <http://surveys.worldbank.org/lsmis/our-work/data/data-table> (Accessed February 12, 2019).

the LALI firm and the community are the parties. Communities where there are youth groups that can fight for the youth could play a part in the LALIs contracting. In the LALIs negotiation, the youth will have a strong voice as they collaborate with community leaders and landowners for their concerns to be taken into consideration in the LALI deal or negotiation. Where there are some disagreements, the government intervenes to solve the impasse. Some land tenure systems are not good for the local people to benefit from LALIs if there is no government intervention. Wily (2011) noted that customary claims are not usually accorded the same legal protection of property rights, which makes local land users susceptible to expropriation. The community (or youth) could benefit (employment) where the government has developed capacities to handle such land deals. Cotula *et al.* (2009) acknowledged the potentials of land investments but warned that these may not be handy if host governments (or community leaders) fail to build capacities to negotiate better terms for their people.

In LALI contracting, it is mainly done by the LALI firm and community leader (land owners). For the community to gain some benefits from LALI contracting, the leaders must negotiate better for the members of the community. There is better negotiation and with involvement of the youth in the land contracting, the LALIs' presence brings some benefit to the community including employment generation. In the employment generation benefit, there are direct and indirect employment benefits. With the LALI firm sited at the community, it offers direct employment to the people by engaging drivers, farm labourers, administrative staff, mechanics; rents are paid to landowners, individual's deals with the company as retailers or suppliers of some raw materials to the company. Some other indirect employment opportunities include³: contract farming, out-grower schemes, social amenities built by the LALI Company, corporate social responsibility of the company comes with employing some casual staff, infrastructures is put up which require labour. Another indirect employment is the inflow of capital into the community (for instance improved seeds, technology, machinery, and fertilizers), which makes agriculture booming in the community. Hence, in an effort to reduce youth unemployment, host countries could establish better bargaining power for the community to ensure that employment of the people in the location where LALIs are situated is given priority attentions.

2.2 Method of Analysis

Both qualitative and quantitative data are used to achieve the objectives of the paper.

2.2.1 Quantitative technique and data description

The study used data from the Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS_ISA) conducted by the World Bank in collaboration with Nigeria's National Bureau of Statistics (NBS). The LSMS_ISA data for Nigeria covers the 36 States of Nigeria plus the Federal Capital Territory-FCT, Abuja. The data is grouped into: community, households, and agriculture for the two segments (i.e. post-planting and post-harvest) of the survey. For the purpose of this study, the community and the household levels data is used, which involved merging the two sets of data for the Wave 3 (2015/2016). There are 500 Enumeration Areas (EAs) sampled from the total of 774 Local Government Areas (LGAs) in Nigeria (including urban and rural areas) in the 36 States and FCT. The analysis is done at the household level while information on the EAs (e.g. EA codes) is used in categorising communities with LLIs and

³ The indirect employment opportunities are important but it is outside the scope of the present study, which can be examined for future research.

those without it. Thus, for the purpose of this study, a community is used almost synonymously with an EA. The essential thing about the LSMS_ISA data is that information about the location (i.e. codes for EA and LGA) as well as codes for households is unique in data files in both Waves. This makes the combination of the data to show time dimension possible using the relevant identification codes for the households and EAs. The quantitative data is estimated with the Difference-in-Difference (*DiD*) technique.

2.2.2 Variable Definition

The measure of the youth is based on the International Labour Organisation (ILO)'s definition of the youth as those individuals that fall within the age bracket of 15-34 years. The variables included in the main regression model are informed by the literature. For instance, Asiedu (2004) concluded that education of individuals, within the location of the large-scale agricultural land investments (LALIs), is a major determinant of the employment capacity. Also, Asiedu *et al.* (2011) stated that the health situation of individuals in an FDI located area would affect the productivity of FDIs since healthy workers are more productive than sickly ones. Thus, the education and health status of the individual are included as variables. The variable large-scale agricultural land investments (LALIs) are the presence of land investors in the community where the individual resides where 1 is for communities where land deal occurred and 0 otherwise. Other control variables for the quantitative analysis are; right to land, distance to bank, presence of financial institution, non-agricultural shocks, agricultural shocks, access to credit from financial institution and food consumption-dietary diversity. All other variables are informed by literature (Osabuohien *et al.*, 2015; Herrmann, 2017; Osabuohien *et al.*, forthcoming 2019b). The names and definition of the variables are presented in Table A1 in the Appendix.

2.2.3. Estimation Technique

The main estimation technique for the quantitative analysis is the Difference-in-Difference (DiD)⁴. This estimation technique is an important impact evaluation technique that estimates the counterfactual for the change in outcome for the population (i.e. households) in communities with LALIs by calculating the change in outcome for the households in communities without LALIs. This estimation technique takes into consideration any differences between the two groups that are constant over time.

The *DiD* technique is applicable when an intervention is random, conditional on group fixed effect and time fixed effect. In this case, the *intervention* of interest is the presence of LALIs in communities that are represented in the LSMS_ISA dataset. For the *DiD* estimation to be successful, both groups of interest should have similar time trends and there are no anticipation of policy intervention, regional shocks that will make the groups to be non-comparable. We are confident of overcoming this challenge since the communities of interest are exposed to the same macroeconomic atmosphere and general economic policy.

When applying *DiD* technique, there are two *states of affairs*, $S = 0; 1$ (in our case, communities with LLIs =1 and those without it=0) This can be expressed in equation (3.1) as:

$$W = \begin{cases} 1 & \text{if } S = 1, t = 1 \\ 0 & \text{if otherwise} \end{cases} \quad (3.1)$$

⁴ Propensity Score Matching (PSM) was also used; however, PSM estimation technique and results are not presented due to space constraint. It is available upon request.

From equation (3.1), the relationship of interest can be depicted as:

$$Y_{st} = \alpha + \rho W_{st} + \gamma_s X_s + \tau T_t + \epsilon_{st} \quad (3.2)$$

The time-invariant fixed effect and the common time trend can be differenced out and expressed as:

$$\tilde{Y}_s = Y_{s1} - Y_{s0} = \rho(W_{s1} - W_{s0}) + \epsilon_{s1} - \epsilon_{s0} \quad (3.3)$$

From above, the difference-in-difference (*DiD*) is written as:

$$Y^{DiD} = \tilde{Y}_1 - \tilde{Y}_0 = Y_{11} - Y_{10} - (Y_{01} - Y_{00}) - \rho(W_{11} - W_{10} - (W_{01} - W_{00})) + \epsilon_{11} - \epsilon_{10} - (\epsilon_{01} - \epsilon_{00}) \quad (3.4)$$

Equation (3.4) can be abridged as:

$$Y^{DiD} = \rho + \epsilon_{11} - \epsilon_{10} - (\epsilon_{01} - \epsilon_{00}) \quad (3.5)$$

Thus, the *DiD* given as equation (3.6):

$$Y^{DiD} = \rho \quad (3.6)$$

2.4 Qualitative Approach

The qualitative approach is carried out with fieldwork using Key Informant Interview (KIIs) and Focus Group Discussion (FGDs) of LALIs. A purposeful and stratified sampling method was employed in selecting the LALIs used in the study. Kwara State was selected due to the fact that the State has one of the highest concentrations of LALIs especially those with foreign investors. However, the choice of Ogun State is given the increasing number of domestically owned LALIs. This is occasioned by the strategic location of Ogun State, which is between Lagos State (the commercial hub of Nigeria) and other countries in West Africa, namely Republic of Benin. Hence, the State enjoys the positive externality from the population and commercial thrives of Lagos. The third State from which our sample is drawn is Ekiti State, which also has LALIs, some of which operate on commercial basis like those in Ogun and Kwara States.

The non-probability sampling technique (purposive sampling) was adopted in selecting the respondents for the structured interview. This technique was used because the probability of other stakeholder groups cannot be determined. Hence, individuals were left to choose whether to participate in the study or not. The respondents comprise both workers at the farms, as well as youth groups from within the community who do not work on the farms, noting that this study focuses on youth employment. The workers include; a) the actual farm workers (who work directly on the farm), b) their supervisors, c) the farm managers, and, d) other staff (e.g. accountant/cashier, and drivers). The respondents are duly informed that their responses are solely for research purposes and assured of confidentiality of their identities. Each respondent fills out a questionnaire, which includes demographic details, educational status, household details, employment details, income details, expenditure details, welfare details, and questions about the farm.

The focus group discussions (FGDs) are conducted among the farm workers in small groups of between 4 and 6 workers, and youth groups in the communities. The interviews and focus group discussions allow the workers to speak freely on other issues of concern pertaining to employment related issues within LALIs. The notes from the qualitative data are transcribed, identified and analysed through thematic analysis. The thematic analysis focuses on the

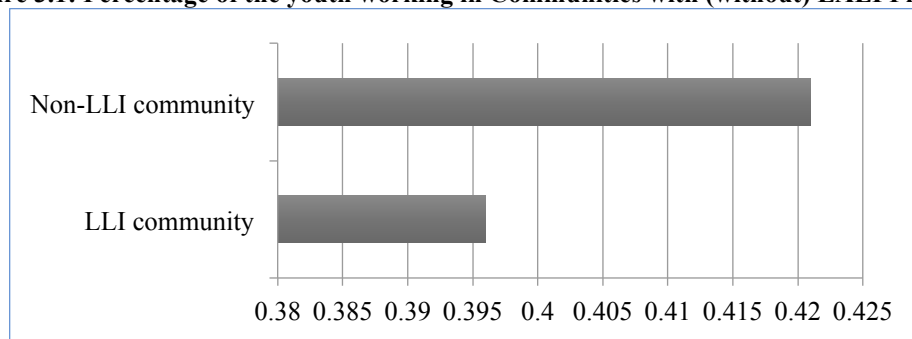
respondents' perception of the LALIs' contribution to employment, nature of employment, wages and other welfare related outcomes.

3. Empirical Results

3.1 Results from Quantitative Analysis

The study first presents the percentage proportion of the youth that reside in communities with LALI and those in communities without LALI who are currently working. We find from Figure 3.1 that the youth living in communities without LALI report a higher proportion of economic engagement compared to those living in communities with LALI. In effect, 41 percent of the youth living in communities without LALI report that they were economically engaged in the survey, while only 39 percent of those residing in communities with LALI report that similar economic engagement. Though these differences are seen, they were not significantly different when subjected to test of comparison of means. It is important to highlight that these differences are mere descriptive statistics and does not imply causal relationship between LALI and youth employment in these communities.

Figure 3.1: Percentage of the youth working in Communities with (without) LALI Presence



Source: Authors' Computation from LSMS-ISA

Second, we present the non-parametric regression to understand – without imposing any parameter restrictions on the relationship – the trend analysis of wages and the number of hours worked across the age of the youth in communities with and without the LALI presence. In Figure 3.2 (segment a), it is evident that the youth that live in communities with LALI see increased wages compared to those who live in communities without LALIs, especially within the age range 20 years to 34 years. For the older youth who live in communities with LALIs, we find that the wage gap closes compared to their counterpart who lives in communities without LALIs. For the youth who live in communities without LALI, they experience no much wage differential across age. Despite, these wages are lower than their counterparts who have opportunity to work in LALIs.

Figure 3.2 (segment b) shows a different pattern when considering the number of hours that the youth who live in communities with (and without) LALI presence. Figure 3.2b shows that there is a clear difference in the number of hours worked for the youth who live in communities with LALI compared to those who live in communities without LALI. For the youth in the former communities, we find from Figure 3b that they work shorter number of hours compared to the youth who live in communities without LALI. This difference is significant. Implying that it is likely that the youth work limited number of hours in communities with LALI compared to when living in communities without LALI. Interestingly, despite that youth in communities with LALI work shorter hour, they earn more that the youth in communities without LALI.

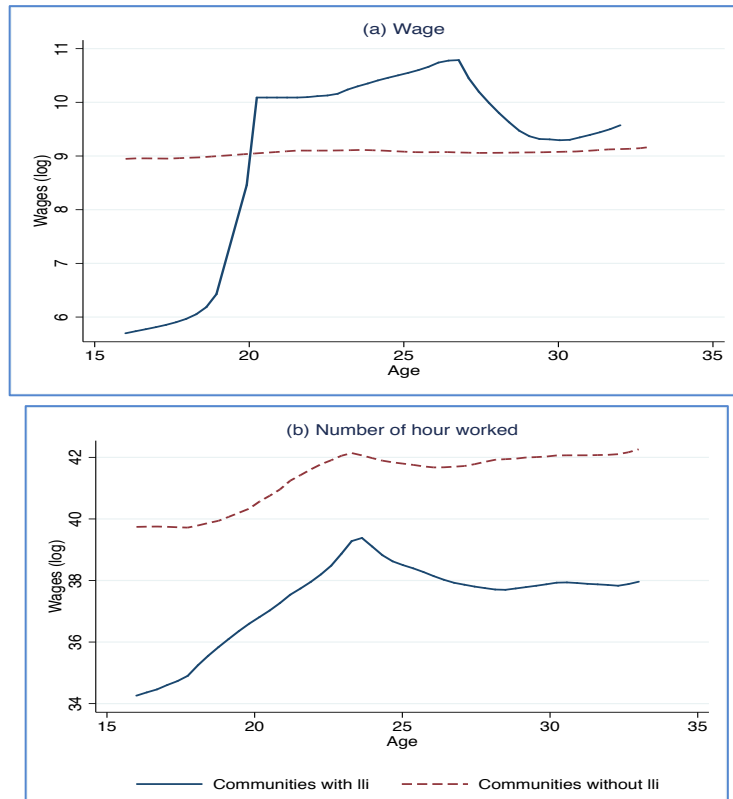


Figure 3.2: Wages and Number of Hours Worked by The youth across LALI Locations

Table 3.1 reports the difference-in-difference results when considering LALI presence in household' communities and its causal effect on wages, number of hours worked, and the actual employment status of the youth in Nigeria.

The results in Table 3.1 show that the presence of LALIs in the communities of households in Nigeria results in 1.238 percentage decrease in the wage earned by the youth. This effect is not significant at the traditional 1 and 5 percent levels, but at 10 percent level. For the number of hours worked by the youth and the presence of LALIs, we find from Table 2 that compared to living in communities without LALIs, there is a reduction in the number of hours worked by the youth by about 6 hours as a result of the presence of LALIs. Likewise, this effect is only significant at the 10 percent level, but not at the 1 and 5 percent levels. This is similar to what Barbanente and Aisbett (2016) established that LALIs regions show large decreases in agricultural work hours and that this fall has been somewhat offset by increases in the average wage work hours and the proportion of households having any wage work hours.

The result may be seen from the perspective that the presence of LALIs could lead to corporate or absentee acquisition of land, which may be based on inherent social divisions in the communities with LALI (White, 2012). For instance, in such communities, the lands are owned and controlled by older generation, whose authority matter in determining the benefits that transcend to others who do not have control over such resources. More so, these LALIs are characterised with paying low wages for labour input (Osabuohien *et al*, 2019). Such low wages

are disincentives for youth engagement or labour input in the investments of these foreign investors, and there are incidences of rising youth migration is caused by the presence LALI (Food and Agricultural Organisation-FAO, 2014).

Table 3.1: LALI Presence and Outcome Variables

Variables	How much was your last payment? (Naira) in Log Form	Number of hours worked	Worked in Household, own or other Enterprises
LALI	-1.238* (0.748)	-6.484* (3.267)	-0.132* (0.056)
Right to land	-0.271*** (0.091)	-0.193 (0.542)	-0.021* (0.012)
Distance to bank	-0.030*** (0.006)	-0.048* (0.029)	0.002 (0.001)
Presence of financial institution	0.373** (0.166)	1.643** (0.931)	-0.046** (0.021)
Non-agricultural shocks	0.1775* (0.093)	-0.167 (0.551)	0.020* (0.012)
Agricultural shocks	-0.5347*** (0.096)	-2.002*** (0.555)	-0.003 (0.012)
Access to credit from financial institution	0.338 (0.245)	-1.193 (1.672)	0.008 (0.036)
Food consumption – dietary diversity	-0.53*** (0.112)	-2.113*** (0.658)	0.073 (0.014)
Constant	9.127*** (0.187)	38.620 (1.059)	----
R2	0.116	0.015	----
Observations	1135	3535	8,131

Note: The values in parenthesis are the standard errors. The superscripts *, **, and *** are significant values are 1, 5, and 10 percent.

Source: The authors'

The estimates of the last outcome variable also suggest that compared to the youth who live in communities without LALIs, those in communities with LALIs tend to have a lower probability of working. This result is also not significant at the traditional significant levels of 1 and 5 percent, but only at 10 percent level. The other control variables suggest that distance to banks, presence of financial institutions within the community of the youth, agricultural shocks and food consumption – measured as dietary diversity are important covariates in determining wage rate of the youth, while for number of hours worked, presence of financial institution, agricultural shocks, and dietary diversity are the important covariates. The probability of working is only informed by the presence of financial institution.

3.2 Results from Qualitative Analysis

The qualitative results are examined with focus on employment provision, wages, hours worked, probability of working and perception of the community on LALI youth employment. The reports from the farm workers at the sampled LALIs, as well as the youth in the communities of interest form the findings for this qualitative sub-section. Table 3.2 provides a summary of the sampled LALIs for this study and shows their respective employment details.

On employment in the sampled LALIs, those in Ado-Ekiti employ up to 500 workers, Ota LALIs employ up to 600 workers, and LALIs in Omu-Aran engage up to 140 workers. All the LALIs in this study engage youth workers as both tenured and casual staff. Some of these LALIs also receive students on their Industrial Training (IT) programme to work with them from time to time. While the tenured staff require some form of education to qualify for employment, the casual staff require no form of education, making it easy for the rural uneducated the youth to be eligible for jobs on the sampled farms, like their educated counterparts.

In-depth interviews with some of the LALI workers revealed that there are more women than men engaged in soft skills such as harvesting vegetables and peeling of cassava. In contrast, there are more men than women who are involved in the tedious aspects of farming, including clearing and harvesting of crops. This is similar to what Ahlerup and Tengstam (2015) noted that on the average land-poor (mostly women and other landless men) have most to gain from agricultural investments, at least in terms of employment opportunities. The findings from the qualitative study further revealed that youth are also employed on contract for specific jobs (such as planting and harvesting) per time. The youth work during peak harvesting periods of a given crop. The employment provision by LALIs tends to increase at peak periods, depending on the time of farming activities carried out on the farm. In Table 3.2, it could be observed that proportion of youth employment with respect to total number of workers was highest in Ekiti State followed by Kwara State while it was lowest in Ogun State. Aigbokhan and Ola (2015) noted similar concern, that LALI deal by Presco Industries in Edo State mainly employed contract workers.

Table 3.2: LALI Description and Employment Information

Details	LALI		
Location	Ado-Ekiti, Ekiti State	Ota, Ogun State	Omu-Aran, Kwara State
Geopolitical Zone	South-West, Nigeria	South-West, Nigeria	North-Central, Nigeria
Number of Workers	Up to 500 workers	Up to 600 workers	Up to 140 workers
Percentage of youth to total employment	45.00	28.57	40.00
Wage range*	₦35,000 – ₦ 94,000 (\$98.59 – \$264.79)	₦15,000 – ₦70,000 (\$42.25 – \$197.18)	₦16,000 – ₦100,000 (\$45.07 – \$281.69)
Incentives	Live animals (fish or chicken) Bonuses (if target is exceeded)	Farm products can be sold at discounted prices to members of staff	Live animals (chicken); 1% – 5% commission on bulk purchases (chicken ≥ 200kg; eggs ≥200 crates)

Note: *The average exchange rate was of ₦355 to US\$1 at the time the fieldwork was conducted.

Source: The Authors'

The wages of workers on the farms are between ₦15,000 (US\$42.25) and ₦100,000 (US\$281.69). Looking at the minimum salary across the sampled farms, the highest minimum salary was ₦35,000 (US\$98.59), while the highest maximum salary was ₦100,000 (US\$281.69). Working hours are an average of nine hours per day for farm workers. During our tour of one of the farms, we met one 400 Level student from the Faculty of Agricultural, Federal University of Agriculture, Akure, Ondo State, who was about commencing her IT attachment training for 6 months. She mentioned that she receives a stipend of ₦5000 (US\$14.08) per month. Even though she thought the pay was little, she was eager to start because she was more concerned with the practical knowledge to be gained than anything else. With respect to other employment benefit, we observed that only few of the farms provide any form of pension plan for its tenured

workers. The other farms have no form of pension. Thus, lack of job security could be ascertained (Aigbokhan & Ola, 2015). While some of the farms offer incentives to their workers, particularly at the end of the year during the holiday season, the value of the incentives is considered inadequate to substantially improve the moral of the employees.

Interviews with key informants in the communities of the LALIs and FGDs with youth groups revealed that local farmers rarely source for employment from the LALIs, as they prefer to operate on their own. However, they are sometimes available to carry out specific tasks for the LALIs if called upon. Further, a respondent remarked that about 30 percent of workers on most agricultural farms are the youth. The youth in the community noted that the employment procedure is generally based on the policy of the LALI, which includes placing of adverts to reach the public. The LALIs employ on fixed term, outsourcing or contract basis.

“The level of youth involvement in the agricultural sector can be rated as low, particularly among the educated class,” said one of the respondents. An average youth in the community lacks the desire to participate in farming or other agricultural activities. One of the farm attendants in his mid-twenties alluded to his choice of employment bordering on the unemployment problem ravaging the youth’s constituency. Another youth who spoke to us said, *“The meagre pay, coupled with the unfriendly odour from the environment of some farms, is another contributing factor that discourages the youth from having a desire to work in the agricultural industry.”* However, it was noted that the youth within the communities of interest have associations that protect the interest of their members and LALI workers who are a part of their community.

On the issue of incentives for the workers, we were made to understand that only a few of the LALIs provided bonus packages at the end of the year, while pension is not provided for the workers. The youth groups mentioned that the wages and salaries ranged from ₦15, 000 – ₦50,000 (US\$42.25 – US\$140.85) depending on the designation, level, department and qualification of the worker, as well as the size of the farm. The above concern is similar to the findings noted by Aigbokhan and Ola (2015). With respect to the level of impact of LALIs to the youth association, the youth leader in Ota stated that employment generation; food availability and communal development were some of the benefits enjoyed by the community. While the youth leader from Omu-Aran community said that LALIs have the capacity to do much more than what they have done so far. This can be done by taking up some community projects and granting of scholarships to indigene youth.

4. Conclusion

This paper was essentially motivated by the need to provide further empirical insights on the nexus between employment and Large-scale Agricultural Land Investment (LALIs) especially in Africa where increasing records of LALIs have been witnessed over the last decade. This research endeavour is deemed relevant due to the fact that the agricultural sector in a host of African countries still provides employment to more than 65 percent of active labour force, on one hand; and Africa is said to have one of the most youthful populations of the world, on the other. Thus, the challenge on how to provide employment for the growing youthful population in Africa has remained a crucial issue and subject of interest across the continent. To enhance the creation of jobs for the youth, many African countries are taking the initiative of making the

agricultural sector more attractive by attracting investments. Thus, this study proffers answer to the research question of how LALIs affect youth employment in Africa using the case of Nigeria. The choice of Nigeria is motivated by the fact that the country is one of the highest 20 LALIs recipient countries globally and also one of the highest 10 in Africa; however, there is dearth empirical research that examines the implications of LALIs especially on youth employment.

From the literature, there exist no uniform direction with regards to the effects of LALIs on employment effect. While some studies (e.g. Barbanente & Aisbett, 2016; Khadjavi *et al.*, 2017) found positive effect, other studies (e.g. Brown, 2012) maintained that LALIs has deteriorating effect on employment. Thus, this study contributes to the literature by carrying out a comparative analysis using samples of households (youth) in communities with and without LALIs using a mixed method (quantitative and qualitative) methodological approach. This is with a view to unravelling the employment effect of LALIs. In achieving its objectives, study utilized the mixed method of analysis based on quantitative and qualitative techniques. The relevance of the mixed method approach is based on its sequential data collection strategy whereby data collected in an iterative process in the first phase (quantitative data) can be further validated by the data in the next phase (qualitative data).

The results from DiD shows that the presence of LALIs in the communities of results to 1.24 percentage reduction in the amount of wage earned by the youth, which was significant only at 10 percent level. On the issue if youth employment (proxied by the number of hours worked by the youth) conditioned upon the presence of LALIs in a community, the study finds a reduction in the number of hours worked by about 6 hours, which is also only significant at 10 percent. The results from PSM have similar pattern with those of DiD where youth in communities with LALIs earn 2.15 percent lower wage rate and work 9 hours less than compared to their counterparts in communities without LALIs.

Based on the qualitative analysis, the study finds varied wage levels paid to workers across the sampled LALIs ranging between \$45.07 and \$281.69 per month with average working hours of nine hours per day (generally between 7:00am and 5:00pm). The above raises concern on the type of employment provided by the LALIs. Similarly, the employment intensity across the selected LALIs ranges between 0.11 and 0.55 employment per hectare; the variation was as a result of the difference in the level of processing that takes place in the sampled LALIs case studies.

The findings of this study are essential as LALIs could offer some form of employment opportunities directly to the members of households in the communities. Hence, in an effort to curb youth unemployment, the LALIs recipient countries could establish better bargaining power for the host communities to ensure that employment of the people in the location where LALIs are situated is given priority attention. The employment creation can also emanate through other avenues such as contract farming or out-grower schemes, which are not covered in this study but can be taken up as agenda for future research.

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Appendix

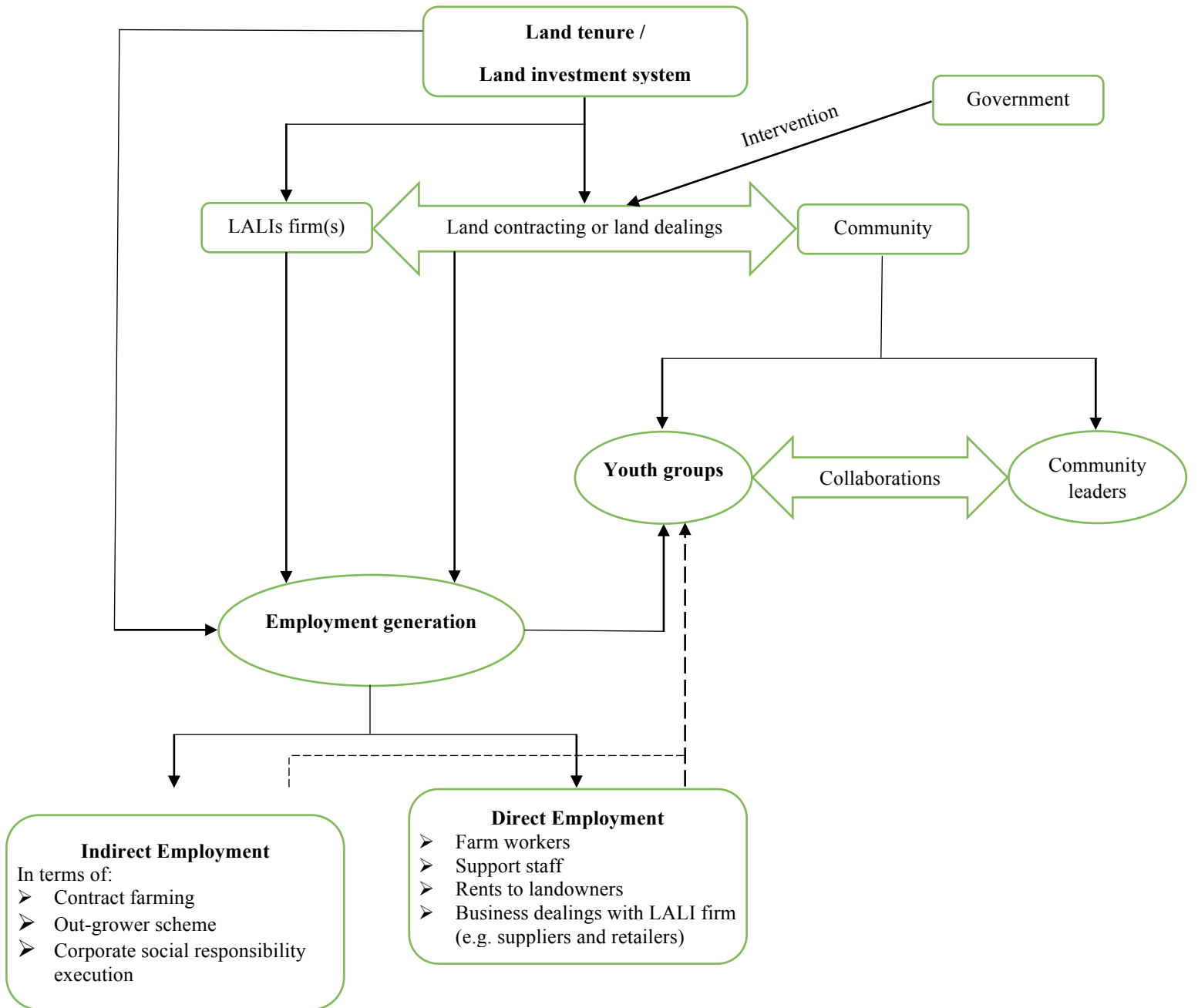
Table A1: Variable Names and Definitions

Variable name	Code	Description of the variables
Age of individual	<i>age youth</i>	Age of the individual (youth) is How old is the person on his/her last birthday (in years).
Sex of individual	<i>sex youth</i>	Sex of the individual (youth) in the community. 1=male; 2=female
Right to Land	<i>land harv</i>	This measures the quantity of agricultural land that the household has right over and can use it for agricultural purpose.
Employment	<i>employ youth</i>	Employment (<i>Youth Emp</i>): Did Individual do any work for pay 7 days or work for pay in the last 12 months or work for yourself (1=yes, 0=no). The higher, the better.
Education of individual	<i>edu youth</i>	Education (<i>Youth Educ.</i>): Did name ever go to school? 1=yes, 0=no. The higher, the better.
Health condition of the individual	<i>health youth</i>	Health Condition (<i>Health</i>): Are you physically fit to do a rigorous work? 1=yes, 0=no. The higher, the better.
Hh wages	<i>Hhwag</i>	The wage earned by the household in Naira in a month. It will be divided into wage from agriculture and non-agricultural sectors.
Hh employment	<i>Hhlab</i>	Household employment labour measured by the labour allocation of households in a month. It will be further categorised into agricultural versus non-agricultural allocations.
Youth groups	<i>youth group</i>	Number of different interest group in the community. The higher, the better
Farmers groups	<i>farm group</i>	Are there any farmers' cooperative group in the community? 1=yes, 0=no. The higher, the better.
Large scale agricultural investment	<i>LALI*</i>	This is a dummy variable, where households in communities with LALI occurrence are classified as 1 and those in communities without LALIs are classified as 0.

Note: Information on LALI was obtained from Land Matrix Global Observatory-LMGO (2017). We included mainly the LALIs that are concluded. Also, we made further efforts to confirm them from reports and interactions during the fieldwork

Source: Authors' compilation using information from LSMS_ISA.

Figure A1: Youth Employment and LALIs Nexus



Source: The Authors'