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*Original Paper*

# Effectiveness Assessment on Overseas Farm Land Investments in Ethiopia

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***Abstract***

*The wave of acquiring large-scale farmland investments for overseas both by the private and state-owned company after the 2007/2008 food and energy crisis has brought a lot of attention worldwide among scholars, media experts, and activist. Sooner or later this huge wave towards overseas large-scale farmland investment has raised a conflicting debate among scholars and developmental practitioners on its significance. In this study we investigate effectiveness levels of those overseas farmland investors, who acquire land in Ethiopia from 1995-2016, using time series data for said period collected from the databank of Ethiopian investment agency. We applied descriptive and inferential statistical analysis using E-views version-9. Finally, the findings indicate that effectiveness of overseas farmland investments for those projects that possess the license and that got the land is about 67.4 per cent. The regression result indicates as there is a significant relationship between origin of the investor's country (0.0039) and farm land size (0.0000) with a P value less than 5 per cent. The result indicates and also substantiates those who perceive the activity as more of land acquisition that the investors are failed to invest appropriately after they possessed the land. Finally, the findings greatly contribute for policy makers and also for implementing appropriate land investment strategy in the whole.*

***Keywords***

*Overseas farm land investment, FDI, Effectiveness and Ethiopia*

## 1. Introduction

The wave of acquiring large-scale farmland investments for overseas both by the private and state-owned company after the 2007/2008 food and energy crisis has brought a lot of attention worldwide among scholars, media experts and activist. Most of the time discussion on the issue comes

up with a polarized idea that some like Davis et al. (2014), Rulli and D'odonico (2013), Desalegn (2011) and Barros (2010 and 2011) reflect as it has a negative impact both at national and local level, particularly to the host country. Whereas other researchers like, Deininger and Byeree et al. (2011), Lu (2017) have optimist outlook for the investments by reasoning out that the investment has a trickledown effect for the traditional local farmers in the less developed region in the form of technology transfer, know-how adaptability, accessibility of modern inputs and also for stabilizing the world market by producing much food from the unused margin land of the southern region if it is properly managed and administer.

Albeit the nonstop debate on the issue of acquiring dozen of land from the different corridor of the world so far, a number of foreign investors continue to conquer huge tracts of land from the developing regions of the south. Particularly investors from the rich northern region, the newly emerging countries in their boom economy namely China, Brazil, India Russian and South Africa (BRICS) and also Gulf nation of the Middle East are some of them to mention. To this, the study by Margulis and Porter (2013) confirms that since 2000 the recorded transfer of agricultural land for transnational overseas farmland investors account more than 83 million hectors of land from the developing nations to the aforementioned developed region. According to them most of the targeted countries are poor and particularly from Africa. They also mentioned out that the land governing system in this country has low administrative mechanisms to handle the land transfer system for the investments. However, as of Rudi et al. (2014) currently the phenomena of large-scale land acquisition become global phenomena of all parts of the world from the South and Central America to Asia and Easter Europe, though the scale of the grabbing is high and a hot spot in Africa.

A large works of literatures on this issue shows that there are differences in drivers and motives for investors from the origin and destination countries for investment. For instance according to Jagerskage et al. (2012), most of the investors from the arid and semi-arid food deficits oil-rich countries of the middle east rush for the investment in need of securing their food shortages by getting sufficient supply of food products in long run. The investment targets on cereals crop production like rice and wheat. At the same time the work by Holm and Halkier (2009) and Pless and Paul (2009) confirms countries from the richer north show an increasing interest towards possessing a huge area of land for agrofuel production. Besides the above drives factors for the investment, there is also one visible reality that currently the world population has been increased unprecedentedly in a tremendous manner upon which high demand for food resource prevailed all over the world that increases the price of food products. Related to this study made by Liu (2014) indicates that the estimated world population reached 9 billion and hence the world agriculture should show increment in its total production to feed some 2.5 billion more mouths from today. As a result, there is a need to have a change in crop and livestock production and land use utility system to meet the growing demand for food consumption. Thus to fill this demand a large volume of land transfer deal has been made in Africa in the last three decades. On this, Cotula et al. (2009) pointed out that due to the accessibility wide range of unused

land that is suitable for farmland investment in Africa, huge amount of land has been transferred to investors' with low land price by lease.

Ethiopia, which this study targets, is among those African countries that have hosted a large number of overseas farmland investors in the last few years. Ethiopia is particularly interesting to overseas investors as the country has a large availability of land and resources and thus is suitable for large -scale land investment. According to the office of the land investment report (EIA, 2011), the country has a total of 111 million hectors of land that are conducive for agricultural investment and also are located in areas which are suitable for irrigation. The report further explained that by realizing this huge potential of land resource in the past few decades more than million hectors of farmland has been transferred to foreign investors. Study mad by Ali et al. (2017) confirms this as the investment has shown increment both in trends and total volume through the contribution is limited for employment creations, yield spillover effect to the local farmers in Africa in general and in Ethiopia in particular.

Following these huge volumes the land transfer, activists and media pundit has been made wide critics on the phenomena in Ethiopia for the whole process of the transfer and investments activity. According to Desalegn (2011), the whole processes of the investment agreements took place by favouring the investors without considering the right and interest the local smallholder poor farmers

However, time elapsed after the investors came to the country and possessed huge trucks of land. During this time there is no study that has been made on their implementation level and the current statues of the projects after they took the land beyond the overall trends and volume of flow. At the same time most of the studies that were made so far targeted on case analysis in small scale level.

Therefore in this study an attempt is made to investigate the effectiveness of overseas farmland investment in Ethiopia by taking a time series secondary data from those investors who possessed license from Ethiopian investment agency from 1995-2016. In doing so this study proceeds with varies methodological procedure, data instrument utility in order to reach a sound conclusion. And then statistical analysis follow and the results of the analysis are then discussed. This study is finalized by giving direction for the expansion further study and other future work.

## 2. Literature

In the last two decades the volume and demand for overseas agricultural investment has been increased globally due to the food shortage and the related increment of its price following the 2008/2009 food crises. On this according to a study conducted by Cotula et al. (2009), Borras and Franco (2012 ) and Kai (2013) indicates that both the private company and government from the rich countries rush towards the south poor countries either to buy or less land right and fresh water to solve their shortage in food production and energy crisis. This new and fast growing agro investment cause direct computation with local people who make land as the main source of their livelihood. Then after the investment attracted much attention from international media, NGO and scholars in the field and considered finally as land grab. In fact there is no consensus among scholars on the concept and still

there is debate on the issue as researcher like Borras and Franco (2012) related it in its extreme case a new form of neo colonization. Whereas others like Collier and Dercon (2014) and Adreas et al. (2014) argue it as the form of overseas farm land investment that are under taking by the rich countries as the same as other forms of investment to exchange capital, technology and knowledge to the poor resource rich countries targeting for fulfill the global food shortage by using the underutilized productive land as a win-win utility.

Beyond such debate the researcher like Barros (2011) continue to arguing on it by defining the investment as land grabbing that largely targeting large-scale land acquisitions through buying or leasing of large pieces of land by domestic and cross national governments, and individuals. Similarly Desalegn (2011) define it as, the catch phrase "global land grab" refers to the rush for commercial land in Africa and elsewhere by private and foreign investors for production and export of food crops as well as bio-fuel. Whereas others like Lu (2017) prefer and suggest perceiving the investment positively as overseas farm land investment as opposite from the above scholars differently. For him the investment is referred as a new form of form of investment by the investors like other business sectors that include the government, enterprises financial institutions and individual that invests on overseas farm land. Afterwards there is a tendency to use the term in different way as land grabbing and overseas farm land investment among different scholars in opposite condition.

Despite such debate, a report by World Bank(2009) indicates that the 2007-2008 food crisis together with the subsequently rising of the prices on food and energy all over the world on one side, and the availability of abundant unused farm land resource in developing countries, on the other side has increased the demands of private investors towards agricultural investment. Similarly there has been also a scenario shift on the thinking of the private investors that investment on agro business will be profitable and has promising potential business opportunity in the upcoming future, which was not usual to see such kind of thing on this sector so far. In addition a study by Cotula et al. (2009), IFPRI (2009) shows that after food and energy crises many private and some government owned investment company from the rich north, the newly merged economy (BRICS ) and Gulf countries flawed to secure their food and energy demand. That is why by the end of 2009 a dozen of countries including Ethiopia, transfer millions of hectors land to these countries (Desalegn, 2011) Others literature strength for instance a work by Matondi, Havnevisk and Beyene (2011) among the main triggers for the prevailing of the demand towards farmland investment; the need to securing access to food, a shift on the use alternative energy sources, partially due to global peak oil, unprecedented economic growth in among The newly emerging economy countries namely Brazil, Russia, India, China and South Africa ( BRICS) and finally climate & environmental concerns are some of them.

Meanwhile as it describe in many literature, beyond it's debatably, this fast-evolving context of farmland investment creates opportunities, challenges and risks for the people of the host countries. For instance a study made by Jesper (2014) shows a result of the intervention in the host countries the increased agricultural investment by domestic and foreign investors can generate a wide range of

benefits such as higher productivity, increased food availability, employment creation, poverty reduction, and access to capital and markets as the pros of the intervention for the host countries. In addition, the work of Shutter (2011) and Collier and Dercon (2014 ) strengthen this idea that for poorer countries who are believed to have relatively abundant unutilized land resource the intervention of large scale agricultural mechanized investment may bring capital, technology, know-how and market access and may play an important role in catalyzing economic development in rural areas. On the other hand, a research that has been made scholars like Cotulla et al. (2009), Cotulla and Lorenzo (2009) and Rulli (2013) reflect pessimistic view towards the investment as it has a negative impact for the host courtiers in the form of environmental destruction and displacement of the permanent settlers from their land. Similarly some of the media pundits and social activists considered the investments as land grabbing, and that foreign investment in agriculture is detrimental to the interests of small farmers and endanger local food security through losing access to the resources on which their livelihood depend. Sonja et al. (2009) also strengthen the idea as local residents may be directly dispossessed of the land they live on, often their long standing heritage.

Ethiopia up on which this study has been conducted is among biggest countries in Africa both in terms of population and areas size. The report by CSA (2007) indicates currently the country has total population of more than 100 million that make it second most papules country in Africa with a total area of more than 1.1 million $km^2$. According to Zeleke (2003) most part of the country is high land in which almost more than 45 percent of the total area also has the most densely populated agricultural area with 200-400 people per $km^2$. His study also indicate these part of the agro ecological zone of the country support 90 percent of the country population that made it the most agriculturally densely populated country in Africa. In line with this huge number of the country population are rural settlers and at the same time make rural small scale farming as the major base of their well being and livelihood.

Besides the above fact the economic Development policy document of Ministry of Finance and Economic Development (2006) for the country the agricultural sector is the engine of as well as the significant contribution of the economy. By recognizing this, starting from 1993 the government adopted Agricultural Development Lead Industrialization (ADLI) policy and strategy to eradicate and enhance rural development in all over the country. Particularly the strategy gave priority towards the improving and scale up of the small scale framers through agricultural intensification and extension.

Meanwhile, as of Getnet (2012) this small scale based strategy gradually starts to shift towards large scale mechanized commercial agricultural production Then after the government draft a policy proclamation for the minim and maximum requirement of the investment especially for overseas farm land investment and a responsible government organ has been established under ministry of agriculture and rural development to facilitate the process.

The policy and strategy document for the federal and democratic republic of Ethiopia (2010) explained that the government of Ethiopia has great ambitions about the contribution of the overseas farm land

investments in its unused large amount of land by reasoning out as the strategy plays great role for government plan to alleviate poverty and food shortage through transferring know how and technology beside its creation of off farm employment new market accessibility for the local small scale farmers.

## 3. Methodology

The target of this research towards the effectiveness of overseas farmland investment finds its justification in the fact that most studies made in Ethiopia so far, focus on sometimes exclusively on the negative side of the investment at local or national level. This is mainly by perceiving the investment as merely as land acquisition by the rich countries against the poor nations in the south (Desalegn, 2010). But in the current study, an attempt is made to see the phenomena as overseas farmland investments that have a positive contribution to the investors and the host country. Having this in mind the study tries to assess effectiveness level of overseas investors in Ethiopia by considering factors such as country origin, farmland size, types of crop cultivated and geographical location within the country.

The dataset for this study is a time serious secondary data types that are obtained from the Ethiopia Investment Agency (EIA). A total of 681 Investment Company that took investment license from 1995-2016 are used as base for the analysis. The EIA data source among these 681 investment company contained information on the country origin of the company, the types of farm activity that the company perform, the regional state that they perform their farm activity within Ethiopia, the total land area they receive in hectors and finally whether the company is shareholder with more than two countries or private country. Then after the overseas investor haven categorized in to different categories based on these diversification so as to make them measurable and manageable for analysis.

After the data collected from EPA records from 1995-2016, in order to test the stated study research questions and attain its objectives, selected method of data analysis has been employed. Following the identification of data from the secondary data source for the case effectiveness assessment various instruments, editing, data entry and data cleaning processes was carried out. Then the analysis has been done by using E-views 9. Descriptive statistics (such as standard deviation and mean), bivariate analysis and ordinary logistic regression (OLS) has been done. In the descriptive statistics part, brief description of the background characteristics of the respondents has been done by using frequency table and cross tabulations.

The presence or absence of relations and association between each independent variable and dependent variable was investigating using the bivariate analysis. Unit root test analysis was employed in order to identify the important explanatory variables which are then retained in the OLS analysis for further investigation; OLS regression analysis was employed to assess the net effect of each determinant factor after controlling for all other factors dependent variables.

Then after to tackle the problem of autocorrelation and to test data stability and to make decision whether the variables that were going to be estimated on the regression are unit root or not, that is statistically significant or not Augmented Dickey Fuller test (ADF Test ) or also called unit root test has

been applied at 5 percent significant level. The guideline to make the decision is in such a way that, if the absolute test statistics is more than the absolute critical value the null hypotheses (the data has unit root) tend to be rejected and the alternative hypotheses (the data has no unit root) is accepted. But if the absolute test statistics is less than the critical value the null hypotheses is accepted and the alternative hypotheses is rejected. Finally the equation for the test is;

$$\Delta Y_t = \beta_0 + \beta_1 Y_{t-1} + \sum_{j=1} d_j \Delta Y_{t-j} + \in_t \ldots\ldots\ldots \text{(Eq. 1)}$$

Where, $\Delta Y_t$ is the change in variable Y over time t, $Y_{t-1}$ is the value of variable Y at time t-1.

Thus after checking the stationary nature of the data the decision is guided to run the OLS model since the model is best fitted for the regression. Then OLS regression logistic model was analyzed in the following way to answer the two research questions. The unit of analysis for the logistic regression model was those investors who have got license from the investment agency of Ethiopia. The investors were those who receive land for investment from1995-2016 for implementation. Then after the probability of starting implementation for the case of effectiveness, which is dichotomous /with two out comes/, was the dependent variable. The value labeled of the variable "1" if a participant was started implementation and "0" otherwise.

Finally OLS regression model was applied in order to determine the relationship of overseas farm land investment with the effectiveness investor's country origin, types of investments, farm land size, nature of investment, geographical location of investment in Ethiopia.

Then the regression model which has been estimated was as follows;

$$LnOFLI = ln\beta_0 + ln\beta_1 FLS + ln\beta_2 ICOR + ln\beta_3 FLA + ln\beta_4 RFLE + ln\beta_5 INVN + \varepsilon_t \ldots. \text{(Eq. 2)}$$

Where lnOFL is effectiveness of overseas farm land investments and FLS, ICOR, FLA are farm land size in hector, investors by country origin and types of farm land activity respectively where as RFLE &INVN indicates regional farm land location in Ethiopia and investment nature by ownership respectively. E- View 9 software has been used for data analysis.

## 4. Results

For the following analysis a sample data for 681 projects who took licenses and received land from 1995-2016. The data source is from the Ethiopian investment agency (EIA). Then the table blow shows the implementation statues of the projects across various criteria.

**Table 1. Implementation Status**

| Category | Start Implementation | Not Start Implementation | Total No. Project |
|---|---|---|---|
| Activity Types | | | |
| Cereals crop production | 84 (12.3%) | 51 (7.5%) | 135 (19.8%) |
| Cash crop production | 256 (37.6%) | 96 (14.1%) | 352 (51.7%) |
| Livestock production | 89 (13.1%) | 69 (10.1%) | 158 (23.2%) |

| | | | |
|---|---|---|---|
| Mixed Farming | 30 (4.4%) | 6 (0.9) | 36 (5.3%) |
| Total No. project | 459 (67.4%) | 222 (32.6%) | 681 (100%) |
| Nature of Shareholding | | | |
| Jointly with Ethiopian | 167 (24.5%) | 66 (9.5%) | 233 (34.3%) |
| Jointly with other countries | 46 (6.8%) | 19 (2.8%) | 65 (9.5%) |
| Individual overseas country | 246 (36.1%) | 137 (20.1%) | 383 (56.2%) |
| Total No. of project | 459 (67.4%) | 222 (32.6%) | 681 (100%) |
| Regional location of project site within Ethiopia | | | |
| North Ethiopia | 43 (6.3%) | 16 (2.3%) | 59 (8.6%) |
| Central Ethiopia | 296 (43.4%) | 135 (19.8%) | 431 (63.3%) |
| South Ethiopia | 45 (6.6%) | 27 (4.0%) | 72(10.6%) |
| Periphery Regions | 36 (5.4%) | 29 (4.3%) | 65 (9.7%) |
| Multiregional | 39 (5.7%) | 15 (2.2%) | 54 (7.9%) |
| Total No. of project | 459 (67.4%) | 222 (32.6%) | 681 (100%) |

*Source*: Author's calculation from EIA data. July-2017.

As it is shown in the descriptive table out of the 681 projects that got the license and received investments land from 1995-2016, 67.4 per cent of the projects started implementation whereas the rest 32.6 per cent were not started their implementation. The implementation status of the projects was cheeked across their types of investment, nature of shareholding and regional location within Ethiopia. Accordingly, the result for implementation status of the projects based on their types of activity indicates that the cash crop investors perform better (37.6%), followed by livestock investors (13.1%). Whereas the cereals crop producer and mixed farming investors perform 12.3 per cent and 4.4 per cent respectively. The result for their implementation status based on their nature of shareholding also indicates that individual investors have high implementation performance with 36.1 per cent. Those who jointly invest with Ethiopian and other countries perform 24.5 per cent and 6.8 percent respectively. Besides investors who took investment land to invest in the central regions of Ethiopia have 43.4 per cent implementation status whereas those who took land in the north, south and multiregional location of the country performed 6.3, 6.6 and 5.7 per cent respectively. Finally, investors who took land in the periphery region have an implementation status of 5.4 per cent which is the lowest.

Here from our discussion during field observation, cash crop producers have better access for market and more profitable than the other types of investors. The central parts of the country have better stability in terms of peace and security at the same time has better facility in terms of infrastructures and other input materials.

**Table 2. Descriptive Results for Implementation Statutes Based on Origin and Farmland Size**

| Country Origin | Start Implementation | | Not start Implementation | | Total farmland size in hector | |
|---|---|---|---|---|---|---|
| | No. of Projects | Farmland Size in hector | No. of Projects | Farmland Size in hector | No. of Projects | Total farmland Size in hector |
| Northern Developed Countries | 226 | 668,194(22.3%) | 61 | 281,968(9.4%) | 287 | 950,162(31.6%) |
| Newly Emerging Countries (BRICS) | 63 | 376,727(12.5%) | 32 | 105,810(3.6%) | 95 | 482,537(16.1%) |
| Gulf Counties | 54 | 634,871(21.1%) | 67 | 250,307(8.3%) | 121 | 885,178(29.5%) |
| Africans | 32 | 214,469(7.2%) | 37 | 570,88(1.9) | 69 | 271,557(9.0%) |
| Others | 84 | 364,620(12.2%) | 25 | 48,782(1.6%) | 109 | 413,402(13.8%) |
| Total | 459 | 2,258,881(75.2%) | 222 | 743,955(24.8%) | 681 | 3,002,836(100%) |

*Source*: Author's calculation from EIA data. July-2017.

As the table above shows, the overseas investors from the developed north took 950,162 hectors of land (31.6%), the Gulf countries and countries from BRICS took 885,178 hectors (29.5%), 482,537 hectors (16.1%) respectively. The others countries and African countries possess 413,402 hectors (13.8%) and 271,557 (9.0%) out of the total land given to investors respectively. For these overseas investors from the different country origin, the result for the implementation level of the company based on the criteria of farmland size 75.2 per cent of the farmland size was cultivated. Whereas the rest 24.8 per cent of the farmland size was not undertaking any form of cultivation on the possessed land. Regarding the difference of their implementation in terms of the investors' origin and farmland size the result depicts that those from the north advanced region has better implementation states (22.3%) followed by the gulf countries (21.1%). Whereas investors from Africa (7.2%) other country origin (12.2%) and the newly emerging economy countries (12.5%) have low implementation performance as compared to the two regions.

**Table 3. Descriptive Statistics on Farmland Implementation**

| | LOG(FLS) | LOG(FLA) | LOG(ICOR) | LOG(INV) | LOG(RFLE) | LOG(SIZE) |
|---|---|---|---|---|---|---|
| Mean | 0.248352 | 0.687472 | 0.687585 | 0.686777 | 0.814780 | 0.459378 |
| Median | 0.000000 | 0.693147 | 0.693147 | 1.098612 | 0.693147 | 0.000000 |
| Maximum | 0.693147 | 1.386294 | 1.609438 | 2.564949 | 1.609438 | 1.609438 |
| Minimum | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Std. Dev. | 0.332608 | 0.397845 | 0.638796 | 0.512186 | 0.396076 | 0.531402 |
| Skewness | 0.591047 | -0.473759 | 0.099445 | -0.461078 | 0.193954 | 0.663838 |
| Kurtosis | 1.349336 | 2.529654 | 1.378055 | 1.611344 | 3.293303 | 2.114309 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Jarque-Bera | 116.9628 | 31.75212 | 75.76870 | 78.84670 | 6.710644 | 72.27600 |
| Probability | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.034898 | 0.000000 |
| Sum | 169.1279 | 468.1683 | 468.2453 | 467.6949 | 554.8653 | 312.8364 |
| Sum Sq. Dev. | 75.22723 | 107.6306 | 277.4815 | 178.3875 | 106.6758 | 192.0239 |
| Observations | 681 | 681 | 681 | 681 | 681 | 681 |

The above table shows descriptive analyses result for implementation status on overseas farm land investment across the variables of country origin, farm land size types of investment, regional location within Ethiopia and nature of shareholder from the data obtained from EIA. It observed that the variable on country origin, types of investment and farm land size is positively correlated whereas the variable on nature of shareholder and location within Ethiopia is not positively correlated. The mean statistics and standard deviation for farmland size (with mean value of 0.459378 and std. Dev. 0.531402) types of investment (mean value of 0.687472 and std. Dev. 0.397845) and country origin (mean value of 0.687585 and std. Dev. 0.638796) indicate as there is highest rated value for the correlation between the dependent variable that is implementation status of farmland investment. This implies that the country origin and farmland size have correlated with performance implementation of farm land activity.

The unit root test model was run before running the OLS model to test the association among variables. Accordingly based on the guide line that putted on the methodology part, the model shows positive result with absolute test statistics that are greater than the critical value for all variables at 5 percent significant level. This implies that the effectiveness of overseas farm land investment is at stationery level to run the OLS regression.

**Table 4. Stationery Analysis**

| Variable | Augmented Dickey-Fuller test statistic | Critical value (at 5%) | Decision |
|---|---|---|---|
| FLA | -25.69252*** | -3.416440 | Stationary at level |
| FLI | -10.10689*** | -3.416459 | Stationary at level |
| FLS | -24.93411*** | -3.416590 | Stationary at level |
| ICOR | -24.63832*** | -3.416440 | Stationary at level |
| INVN | -25.02475*** | -3.416440 | Stationary at level |
| RFLE | -24.53829*** | -3.416440 | Stationary at level |

(*)(**)(***) Indicate that respective variable is significant at 1, 10 and 5% level.

**Table 5. OLS Regression Result on the Relationships with Variables**

Dependent Variable: LOG(FLS)

Method: Least Squares

Date: 11/10/17 Time: 19:22

Sample: 1 681

Included observations: 681

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| LOG(FLA) | 0.039401 | 0.033890 | 1.162617 | 0.2454 |
| LOG(ICOR) | 0.057705 | 0.019909 | 2.898410 | 0.0039 |
| LOG(INV) | 0.025767 | 0.024765 | 1.040471 | 0.2985 |
| LOG(RFLE) | -0.020196 | 0.033247 | -0.607472 | 0.5437 |
| LOG(SIZE) | 0.116342 | 0.026194 | 4.441506 | 0.0000 |
| C | 0.126903 | 0.044838 | 2.830274 | 0.0048 |
| R-squared | 0.048395 | Mean dependent var | | 0.248352 |
| Adjusted R-squared | 0.041346 | S.D. dependent var | | 0.332608 |
| S.E. of regression | 0.325660 | Akaike info criterion | | 0.602844 |
| Sum squared resid | 71.58658 | Schwarz criterion | | 0.642699 |
| Log likelihood | -199.2682 | Hannan-Quinn criter. | | 0.618270 |
| F-statistic | 6.865634 | Durbin-Watson stat | | 1.944233 |
| Prob(F-statistic) | 0.000003 | | | |

The regression analysis has been run to cheek the association between overseas farmland investments implementation across the origin of inventor's country, farm land size, types of investments, nature of share holder and with the regional location of investments farm land with Ethiopia. The result indicates as there is significant relationship between effectiveness status with origin of the investor's country (0.0039) and farm land size (0.0000) with P value less than 5 percent. Whereas the nature of shareholder in investments (0.2985), types of investments (0.2454) and investments site location within Ethiopia (0.5437) are statistically insignificant. The R-squared (0.048395) result shows that a one unit change in the independent variable result a 4 percent change on the dependent variable. Here though the R-squared (0.048395) and Adjusted R-squared (0.041346) values are small, the F-statistics (6.865634) and Prob(F-statistics), (0.000003) are significant as less than 5 percent value. This implies that all variables jointly can influence the independent variable that is farm land investments implementation effectiveness level. Thus the model is good and fitted to run the regressions. Finally the result on the regression indicates that the constant value that is the investment effectiveness status is statistically at 0.0048 with less than five percent p value.

## 5. Conclusion

Effective large-scale farmland investments have wide rage contribution both the host countries that have large unused land and the capital owner countries and private inventors in many aspects. That is why currently most developing nation that has a huge unused land plans to secure their food supply shortage and other poverty-related problems via opening their indoor investment policy for transnational farmland investors. Parallel with this fact, there is a need to have a rigorous evaluation on its implementation level after the investors possess the license and acquire a large amount of land to make a sound decision and to enhance its contribution. Thus this study assessed the implementation effectiveness of overseas farmland investments in Ethiopia by taking a time series data from the Ethiopian investment agency from 1995-2016 from different countries as the origin of the investors.

The finding indicat that almost 32.6 percent (222 companies) of the projects were not start their implementation program. When we compare the implementation performance of the project in terms of the total farmland size that was conquered 24.8 percent of the total land (around 743,955 hectors) was not cultivated. This implies that 67.4 of the project owner started implementation on the 75.2 percent of the conquered farmland (which is 2,258,881 hectors out of the total 3,002,863 hectors of land). This huge truck of uncultivated land after conquered by the investors can be taken as big failed particularly when we see it on the angle of the displaced local farmer who lost their land and the limited scarce land that remain left as unproductive. Thus the effectiveness results indicates and also substantiate those who perceive the activity as more of land acquisition that the investors are failed to invest appropriately after they possessed the land.

The regression result on the relationship for the implementation status of the companies with various attributes farmland size, investors country origin, types of farm activity, location within Ethiopia indicates as there is significant relationship between origin of the investor's country (0.0039) and farmland size (0.0000) with P value less than 5 percent with implementation status.

Of Course, previous studies that are conducted by in another count Deininger and Byeree et al. (2011), Lu (2017) indicate various factors behind the low implementation status of projects after they took the land. For instance are poor infrastructures, political instability, corruption, countries land policy issue and others. For the case of Ethiopia, these things are also the same situation. Particularly a study by Desalegn (2011) critically criticizes the twilight land policy of the country that gives right both the government and the people without a clear demarcation that to which the land belongs.

Therefore, the government of Ethiopia should reconsider the strategy and land use policy of the country. At the same time, the whole process of land zoning and land transfer to the investors should be done carefully so as to sort out potentially capable companies and relatively suitable farmland both in terms of productively and infrastructures facilities. This includes the identification farmland that is suitable for large-scale mechanized farming that is acceptable by the local people and at the same time have the good facility of infrastructure, market accessibility for input and output deliveries. Besides, due care should be taken at the time of inviting foreign investors about their overall capacity in terms finance,

professional capacity and past profile history of the company that has in their own home country or another country for the investment. The size of the farmland should be given accordingly based on their capacity and performance-based evaluation with some time period gap rather than giving too much land at one time. Thus, policymakers and the concerned practitioner that took the responsibility on the government sectors need to revisit their implementation strategic policy and program at the same time their monitoring strategy and performance evolution so as to scale up their effectiveness.

Finally, though further investigation is needed to identify the reasons as for why the remaining 32.6 percent of the investors specifically did not start their implementation from the finding we can infer that poor infrastructures facilities and lack of clear land use policy can be mentioned the main factors. Besides to this the size of the farmland was also considered as other factors. That is those investors who acquired large farm land size were less effective than the medium and small scale size holder investors.

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