

Implications of Land Tenure Arrangements on Food Security and Agricultural Development



Master's Thesis by Challa Getachew

1. Introduction

1.1 Country Overview

- Location - East Africa
- Population - 70 Million
- Area - 1.2 Million km²
- Economic Base - Agriculture



1.2 Background and Motivation

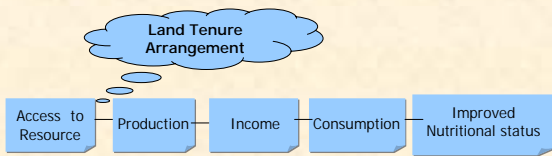
- Agriculture contributes to 45% the GDP and employs 85 % of the population
- Agriculture is dominated by subsistence farming which mainly depends on land as a major factor of production
- Unprogressive land tenure system
- 10% of the population landless and high food insecurity
- The key role of land tenure system as a tool to facilitate tenure security, way of accessing land, transfer of rights and natural resource management.

2. Theory

Increased security of tenure in land resources enable more efficient and profitable agricultural production and hence greater access to food via both production and trade (Plateau 1992).

Land Tenure has to respond to population growth and the technological development and increased level of activity on land (Camilla & Julian 1999).

The theoretical link between Land Tenure and Food Security



Maxwell 1998:3

3. Methodology

Primary methods: Interviewing 72 farming households, interviewing researchers and development practitioners, Observations and Discussions

Secondary methods: document review

Method of data analysis

1. Multiple linear regression model

The functional relationship between variables is expressed as follows:

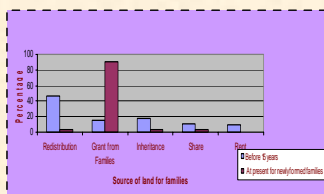
$$Y = a + B_1X_1 + B_2X_2 + B_3X_3 + \dots + B_nX_n + E$$

2. Descriptive statistics (Chi-Square test, percentages) and t- tests

4. Overview of the Major Results

4.1.1 Trends in Modes of Access to Land

Figure 1: Comparison of changes in source of land over time



Redistribution from the government was an important source of land for landless farmers fifteen years ago. This source has come to an end due to lack of further redistribution. Grant from families is nearly the only means since land selling is not possible in Ethiopia.

4.1.2 Land Tenure and Agriculture

No	Constraints in Agriculture	Cases	%
1	Scarcity of land	20	29
2	High input prices	17	24
3	Rainfall failures	2	3
4	Soil infertility	19	27
5	Lack of Oxen	5	8
6	Lack of Credit	5	8
7	Others	4	2
Total		72	100

Table 2 Land Tenure implications in Agricultural Development

Scarcity of land and soil infertility stand as major constraints in agricultural food production for 59% (29 % SL and 27 % SI) of the sample farmers. Scarcity of land is created by the increasing rural population and the subsequent increase in demand for farmland. Soil infertility is caused by pressure on land and lack of appropriate conservation. The long disincentive effect of the state ownership of land and fragmentation of plots have in turn resulted in soil infertility and the subsequent fall in agricultural production. Better management of land with reasonable land size are preconditions for increased production in agriculture.

4.2 Access to Food and Implications of Land Tenure

Relationships Between Variables which Relate to Access to Food and Access to Land

Specification of the Model

$$FG = \alpha + \beta_1 LHS + \beta_2 OXOWN + \beta_3 HHS + \beta_4 LLR + \epsilon$$

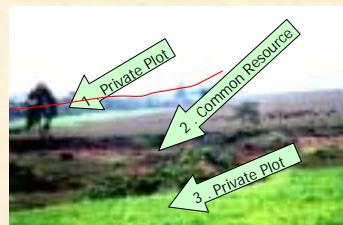
FG - Food Gap in a household , LHA - land Holding size, Oxown - Oxen ownership , HHS - Household size , LLR - Land Labour Ratio, E - Error term

Results of the Regression

$$FG = 7.1657 - 0.5527(LHS) - 1.601(OXOWN) - 0.174(HHS) - 0.474(LLR) + \epsilon$$

The regression result indicated that Food Gap (the number of months a household can not depend on their own production from own land) is significantly negatively related with land holding size and oxen ownership and moderately negatively related with household size and land labour ratio. Oxen ownership and land labour ratio are highly dependent on the size of land held by an household. Food gap is a proxy indicator of household food security.

4.3 Land Tenure and Natural Resource Management



Arrow 2 in the figure shows the state of degraded common property (grazing and forest land) as compared to the relatively well kept private farms shown by arrow 1 & 3 on the adjacent magnifying. This is mainly due to lack of clarity in the ownership and institutional vacuum.

5. Conclusion and Policy Implications

Land Tenure in Ethiopia can be said to have the following problems: Insecurity of tenure, lack of mechanism to transfer rights and lack of mechanism to consolidate plots. The constraints related with the tenure system has resulted in under developed agriculture, high landlessness, high level of food insecurity and degraded natural resource especially common properties. The regression result indicate that the food situation in rural households is highly dependent on the size of land and oxen ownership. Land size is highly dependent on the possibilities of getting access to land and options for land consolidation. The following diagram shows the possible tenure arrangements that can be followed under Ethiopian situation.

