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### THE STRUCTURE AND PERFORMANCE OF LAND TENANCY MARKET FOR SMALL HOLDER FARMERS IN ETHIOPIA: A STUDY OF AMHARA REGION

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**Key words: Land market, sharecropped, fixed rent, market power, inputs market**

#### **Abstract**

The structure and performance of the land tenancy market has an implication on efficiency of the sector. Survey data from 350 observations was used to meet the objectives of the study. Descriptive statistics was employed for analysis. It is found that most owners prefer sharecropped over fixed rent whereas tenants prefer fixed arrangement over sharecropped. However, land owners were the final decision maker in rental arrangement choice. The final decision maker in crop choice is also land owners. These results are manifestation of existence of unequal power in the market. It is hardly possible to get a market for more productive lands and lands located near to owners' resident. Lack of oxen was the main reason for owners to rent-out their land followed by lack of labor and other inputs. The market for oxen is uncommon but there is an exchange of oxen with human labor among relatives. But the barter exchange rate is different from the market exchange rate. An exchange of farmer with other labor service is common. The rate of exchange is one to one even if the wage of farmers is higher than the wage of other labor services. These revealed the existence of factor market imperfection. Frequent reallocations of land and providing access to credit for input are important to enhance the performance of the sector.

#### **Introduction**

Agricultural land plays a special role in the daily livelihood and general social structure of the vast majority of people in many developing countries. As a productive factor, access to land is an important element to combat poverty (Pender and Fafchamps, 2006). Land is an important factor of production in Ethiopia and there is continued debate over the land policy of the country. Privatization of land, liberalization of land rental markets, and instituting secure, long-term

and transferrable use rights are policy alternative proposed by policy makers to improve productivity and efficiency of land use. The government, on the other hand, supports protection of the rural peasantry through state ownership of land and restrictions on land transactions (McClung, 2012).

In a world with no uncertainty and perfect markets, where all inputs are divisible, there would be no room for tenancy in agriculture (Nabi 1985). However, due to market imperfections and the uncertainties of agricultural production, tenancy has become an important production arrangement in developing-country agriculture (Braverman and Stiglitz 1982; Otsuka et al., 1993).

According to Bell (1976), the non-existence of a market for non land agricultural land hire services provides the rationale for land-renting markets with the result that households with surplus input relative to their land assets would choose to rent-in land, while those with more land relative to their non land input would rent-out their surplus land. Rahman (2010) pointed out that the likelihood of renting-in land is higher for farmers with inadequate cultivable land but with higher levels of livestock and other farm capital asset ownership.

According to Ethiopian constitution, the right to ownership of land is vested in the state and the public. Hence, it is impossible to transfer the land holding to other in sale or in exchange by another property. The aim of the government is to protect the rural peasants from selling off their land to wealthy individuals leaving them landless and without source of livelihoods. However, the regime introduced land lease policies with restrictions on the duration and extent of land renting (Holden and Otsuka, 2014).

Prohibited land sale and absence of frequent land reallocation creates market gap between the demand and supply of agricultural land. The land tenancy market is expected to have key importance in reducing the gap (Stiglitz, 1974).

The majority of youths in Ethiopia live in rural areas where farming is still the main livelihood of the people. The absence of frequent and regular land redistribution and constitutional prohibition of land sale accompanied by rapid population growth in Ethiopia makes many rural youths landless. Some farmer households rely on inheritance, which leads to a problem of declining farm sizes, so as to accommodate descendants. Landless farmers use tenancy market as the main means for getting land (Ghebru and Holden, 2012). Therefore, land rental market is expected to play an important role in the reallocation of land from land rich to land landless households.

However, there is no consensus among professionals regarding the effect of share tenancy. Several authors have argued that share tenancy causes inefficient resource allocation because tenants receive fraction of the value of their marginal productivity, which discourages tenants to supply an efficient level of inputs (Smith, 1776; Mill, 1848; Marshall, 1890). On the other hand, Cohen and Galassi (1990) explained that, because sharecropping denied to the landowner the full return of capital expenditures in agriculture, investment will be discouraged and it promote an excessive use of labor.

There is heterogeneity in non-land resource endowment that causes inequalities in relative factor ratios endowment across households Ethiopia too (Ghebru and Holden, 2008), and due to problems of moral hazard, liquidity constraints and seasonality of farm production, labor and oxen rental markets does not function smoothly for factor-ratio adjustment (Holden et al, 2008). Therefore, lack of one or more important non-land factors of production induces landowners to

join the tenancy market although they have small land holding. Tenancy contracts are serving as way of tackling the market imperfections in the land, labor, capital and other agricultural input markets (Sadoulet et al., 1997). Due to the imperfection of non land factor market and relatively equal distribution of land in the country, landowners are poor in non-land resources while tenants are rich in non-land asset (Ghebru and Holden, 2012).

The presence of tenancy markets does not necessarily guarantee efficiency unless they and the other factor markets work reasonably well (Tikabo and Holden, 2004). Consequently, the well functioning of the land lease market is a very important issue due to the fact that its effect on the performance of the overall economy and the effort toward poverty reduction (Ghebru and Holden, 2008). Generally, the challenge of policy makers is to develop land policies that allow land markets to play a role that promotes sustainable outcomes.

### **Objectives of the Study**

The main objective of the study is to investigate the structure and performance of small holder farmers land lease market in Amhara region.

### **Material and Methodology**

#### **Description of the Study Area**

According to the Federal Democratic Republic of Ethiopia administrative structure, there are nine regional states and two city administrations in Ethiopia. The Amhara National Regional State (ANRS) is one of the nine regional states of Ethiopia and it is the second largest regional states in the country. The total estimated area of the Amhara region was 170,752 square kilometers. The region shares borders with Tigray region in the North, Afar and Oromia regions in the East, Oromia region in the South, and Benishangul region and the Republic of Sudan in the West. The region is divided in to 10 administrative zones and 114 *Woredas* (Tsfahun et al., n.d.). Based on 2007 census, the region has the total population size of 17,221,976 and the number of households was 3,849,140 (CSA, 2007). The population of the region constitutes about 23 per cent of the total population of the country and in terms of area it contributes around 15 per cent. Nearly 90 per cent of the population of the region resides in rural areas and agriculture is their main source of livelihood (BoFED, 2009/2010).

The average land holding per household is about 1.3 ha. The average farmland holding is significantly higher among male-headed households than their female counterparts. About to 89 percent of the plots are cultivated by their owners while the remaining 11 percent of the plots are cultivated through temporary rent, mostly sharecropping. Study indicates that males tended to rent in more while females tended to rent out more (Benin et al., 2006).

#### **Sampling and Data Collection Methods**

The relevant population of this study is rural households of Amhara region. The first step of the sampling process was stratifying the study area in to administrative zones. The second step was selecting one district/site from S/Gondar, C/Gondar and N/Gondar Zone of Amhara region using convenient sampling method. Finally, respondents who are living in the selected districts/sites were sampled based on stratified random sampling method.

The sample size was determined by Yamene (1967) minimum sample size determination formula. According to his formula:  $n = \frac{N}{1 + Ne^2}$ , where  $n$

refers to sample size,  $N$  refers to total household number and  $e$  refers to level of significance. The total number of rural households is about 3,464,226 and level of significance is 5 per cent.

Then, the sample size  $(n) = 3464226 / (1 + 3464226 * 0.05^2) = 400$ . Therefore questionnaires were distributed to 400 respondents and relevant and full information was obtained from 350 respondents. Household survey was conducted to collect primary data from sample respondents using structured questionnaires.

### Method of Analysis

The study used descriptive statistics like mean and mode to analysis the data and meets the objective of the study.

### Result and Discussion

#### Profiles of Respondents

To meet the objective the study the information from 350 obviations was used. Table-1 shows the demographic characteristics of the samples. It is found that the average age of the respondent was about 45 years with a mean family size of 6 and average labor force size of 3.5. It is also found that household heads had about 25 years of farming experience.

The survey result indicates that households have different source of access to land including government, gift from family, land tenancy market. During the survey year, the average size of cultivated land obtained from family and government was about 2.4 and 0.9 temads respectively.

On the other hand the average cultivated land obtained from the land tenancy market was about 2.4. Based on the survey data about 1.7 temads of the land were sharecropped and about 0.7 temad was obtained by fixed rent agreement. Government is the main source of access to land followed by land tenancy market. Compared to the four sources of access to land mentioned here, sharecropping is the second important source of access to land following and the land tenancy arrangement is dominated by sharecropped arrangement.

**Table-1. Profiles of Respondents (Continuous variables)**

Variable Name	Mean	Std. Err.
Age	45.55238	.6091498
Family size	5.850794	.115522
Labor force size	3.52381	.0880352
Farm experience	25.49524	.6489825
Government land	2.369206	.1532548
Gift land	.902381	.0820302
Rented in land	.7103175	.0647358
Sharecropped land	1.703968	.0867779

Source: Researchers' Survey of 2019

The information for categorical data shows that about 98 percent of the household head were male indicating that all most all households are male dominated. About 95 percent of the households were married and the remaining 5 percent were single, widowed and divorced. It is also found that 44 percent of the household heads were illiterate, 39 percent could read and write (informal education), and only 17 percent of the household heads attended formal education. This proved that there was high illiteracy rate in the region.

The information about access to credit and off farm income revealed that about 61 percent of the respondents had no access to credit and only 15 percent of the households participated in off farming activity and 85 percent of the sample households used farming as the only source of income (Table-2). Access credit helps farmers solve their seasonal financial constraint and increase production and productivity. However, most farmers have no access to credit. On the other hand, despite the fact that having multiple source of income increases households' livelihood security, most households rely on single source of income.

**Table-2. Profiles of Respondents (Categorical variables)**

Variable Name		Frequency (%)
Sex	Male	97.71
	Female	2.29
Marital Status	Single	2.86
	Married	94.54
	Widowed and Divorced	2.58
Level of Education	Illiterate	43.71
	Informal education	39.14
	Formal education	17.14
Access to credit	Yes	60.86
	No	39.14
Off-farm income	Yes	14.86
	No	85.14

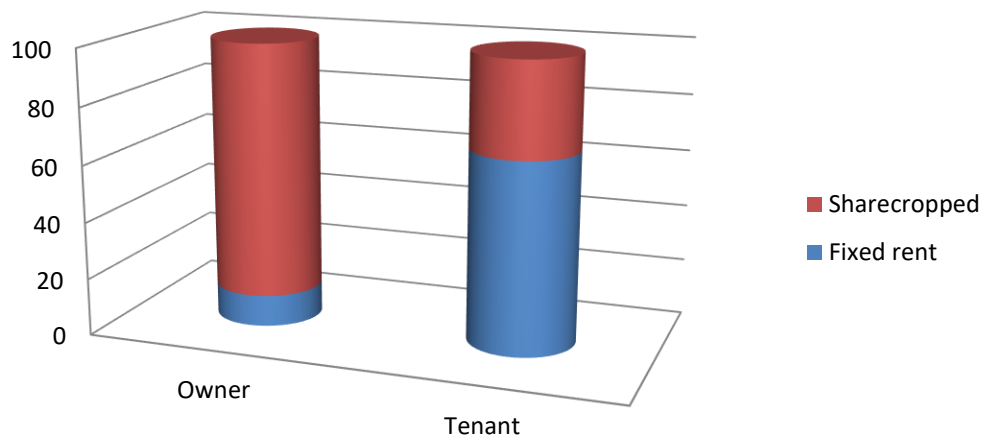
Source: Researchers' Survey of 2019

### **Land Rental Arrangement**

One interest of the researcher was to investigate owners' and tenants' preference for land rental arrangement and the structure of the land tenancy market. Around 67 percent of the respondents said that tenants prefer fixed rent arrangement over sharecropped arrangement (Figure-1). On the other hand, about 89 percent of the respondents said that owner prefer sharecropped over fixed rent arrangement (Figure-1). Owners' main reason of choosing sharecropping was that the value of the output (benefit) obtained from sharecropped arrangement is by far higher than the benefit obtained from fixed rent arrangement (rent of land under fixed arrangement is very low). On the other hand, lower cost of management and low conflict were the reason for the tenant to prefer fixed rental system over sharecropped.

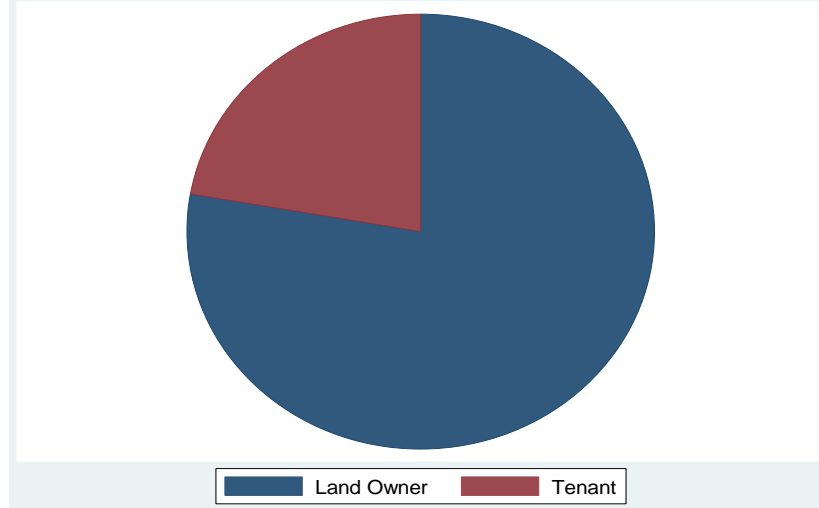
This indicates that there are rental arrangement choice difference between tenant and owner. Owners prefer sharecropped over fixed rent while tenants choose fixed rent over sharecropped. This indicates that there is difference in estimation of expected output among actors. There is under estimation of expected output on the tenant side and over estimation of expected output on the owner side. This finding is the manifestation of imperfect information about the expected output, and risk aversion behavior of tenants and risk taking behavior of owners.

Figure-1. Agents tenancy arrangement choice



Studying structure of the land tenancy market is another important interest of the researcher. The study used decision making power in rental arrangement choice as indicator of the nature the market. About 78 percent of the respondent stated that land owners are the final decision maker in rental arrangement choice when there is preference difference among actors. This shows the existence of unequal power among owners and tenants; owners are more powerful than tenant in the land tenancy market. This in turn is an indicator of the excess of demand for land over supply of land in the land tenancy market.

Figure-2. Decision maker in rental arrangement choice



### Crop Type Choice and Characteristics of Rent-out Land

The research also studied the crop type choice across agents in the land tenancy market. About 65 percent of the respondents replied that there is crop choice difference between owner and tenant. Respondents reflected that owners prefer input intensive and high value crops whereas tenants prefer crop types that need less inputs. Most of the respondents agreed that tenants often allowed to choose the type of crop going to be cultivated on sharecropped land. However, in a situation when an owner sticks to a particular crop to be produced, it would be a must for the tenants to respect owner's interest regardless of his own interest.

This result is another manifestation existence of unequal power and tenancy market imperfection.

Besides, the study explored the kind of land that owners are commonly rent-out. Most respondents reacted that owners rent out less fertile lands and lands which are very far from the owners' home. More fertile lands and lands near to owners' home are often operated by their own owners. This revealed that there is not market for more productive lands and lands located near to owners' resident.

**Table-3. Crop type preference and Characteristics of rent-out land**

Variable Name		Frequency (%)
Crop choice difference	Yes	64.81
	No	35.19
Decision maker in crop type choice	Land owner	35.80
	Tenant	61.83
	Both	2.37
Rent out Land type-More fertile land	Yes	23.79
	No	76.21
Rent out land type-Less fertile land	Yes	60.84
	No	39.16
Rent out land type-Near land	Yes	13.68
	No	86.32
Rent out land type-Distant land	Yes	88.40
	No	11.60

Source: Researchers' Survey of 2019

#### Market for Agricultural Inputs

The study explored the main reason for owners to rent-out land. It is found that lack of oxen was the main reason for owners to rent-out their land followed by lack of labor and other inputs.

**Table-4. Reasons for renting-out land**

Input type	Answer	Frequency (%)	Cum
Lack of oxen	No	48.15	48.15
	Yes	51.85	100.00
Lack of labor	No	51.66	51.66
	Yes	48.34	100.00
Lack of other inputs	No	61.97	61.97
	Yes	38.03	100.00

An effort has also been devoted in this research to assess the functioning of the markets for inputs as they are reasons of owner for renting-out their lands. About 74 percent of the respondents said that there is higher demand for oxen rent-in. However, most of them replied that it is hardly possible to get oxen for rent. This is partially due to the fact that the cultivation season is too short so that owners of oxen give priority to cultivate their own plot. The other main reason was that it is not culturally supported to renting out oxen. So, there is low supply of oxen in the market.

On the other hand, most respondents agreed that there is an exchange of oxen with human labor among relatives. About half of the respondents stated that one pair of oxen was exchanged for two workers. When we see the monetary

value, one pair of oxen was rented for about 300, but the wage of two workers is about 200 birr. This indicates the imperfection of the market for inputs. An exchange of farmer with other labor service is common. Most respondents stated that the rate of exchange is one to one even if the wage of farmers is higher than the wage of other labor services. Hence, the imperfection of the market for other inputs is one cause for the existence of the land tenancy market.

The study investigated the contribution of the government for the proper functioning of the land market. Respondents mentioned different roles that the government plays in the land tenancy market. Providing consultancy services, legalization of agreements, securing land ownership, providing information related to land policy issues, resolving conflicts and enforcing contractual agreements were the common roles of the government in the land market.

### **Conclusion and Recommendation**

Prohibited land sale and absence of frequent land reallocation creates market gap between the demand and supply of agricultural land. Therefore, land rental market is expected to play an important role in the reallocation of land from land rich to land landless households. Consequently, the structure and performance of the land tenancy market is a very important issue due to the fact that its effect on the performance of the overall economy and the effort toward poverty reduction.

Survey data from 350 observations, selected by multistage sampling method was used to meet the objectives of the study. Descriptive statistics was employed for analysis. It is found that there difference in tenancy arrangement choice among agents. Due to more benefit, most owners prefer sharecropped over fixed rent whereas tenants prefer fixed arrangement over sharecropped. However, land owners were the final decision maker in rental arrangement choice. This shows the existence of unequal power among actors.

It is also found that there is crop choice difference between owner and tenant. Although tenants are often allowed choose the type of crop going to be cultivated, it would be a must for the tenants to respect owner's interest if an owner sticks to a particular crop. This result is another manifestation of existence of unequal power and tenancy market imperfection. Most respondents reacted that owners rent out less fertile lands and lands which are very far from the owners' home. This revealed that there is rare market for more productive lands and lands located near to owners' resident.

It is found that lack of oxen was the main reason for owners to rent-out their land followed by lack of labor and other inputs. There is excess demand for oxen rent-in compared to the supply. Most respondents agreed that there is an exchange of oxen with human labor among relatives. One pair of oxen was exchanged for two workers. But, one pair of oxen was rented for about 300 and the wage of two workers is about 200 birr. This indicates the imperfection of the market for inputs. An exchange of farmer with other labor service is common. Most respondents stated that the rate of exchange is one to one even if the wage of farmers is higher than the wage of other labor services. Frequent reallocations of land, provision of information, changing perception of oxen owners about oxen market and providing access to credit for input are important innervations to enhance the performance of the sector.

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