

Full Length Research Paper

Economic Analysis of Land Tenure Systems on Arable Crops Production in Ekiti State, Nigeria.

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The study examined economic effect of land tenure systems on arable crop production in Ekiti State, Nigeria. Attempts were made to examine the type of land ownership rights problems of land acquisition, the pattern of land use and the resource use efficiency of land as a factor of production in arable crop production in the study area. Data were collected from 120 arable farmers randomly selected for interview with the aid of questionnaire were used to analyze. The study revealed that the arable farmers were fairly educated with about 41.7% having secondary education and 16.7% having primary education. The sampled farmers were small holders with 80.8% having less than 4ha of land, this agreed with the fact that most of the arable crop producers were producing for family consumption with the 76.7% of the farmers operated on subsistence basis. It was also indicated that the prevailing tenure type was inheritance ownership right with 60% of the respondents acquiring their land through inheritance. It was also discovered that the prevailing traditional tenure (inheritance, communal) systems has resulted to farmland fragmentation which would not encourage mechanization and commercial agriculture. According to the study, the prevailing land use patterns were the arable cultivation followed by permanent crop cultivation. The production function analysis showed that all the variables were productively used for having positive estimate except fertilizer and agrochemicals that had negative estimate elasticity. Therefore, government must seriously address the issue of land acquisition so that prospective farmers have free access to arable land empowered them to solely make their own production decision (in accordance with the principle of land use) without the dictatorship of the landlords.

Keyword: Land Tenure, Arable crops, Multiple Regression Analysis

INTRODUCTION

Agriculture plays an important roles in the development of all nations. In facts, it is mainstay of the developing countries. It is seen as an occupation or profession from which to derive a livelihood, agriculture is an industry or business employing knowledge of various science for the production of food, feeds and fibre (L.K Opeke, 2006)

Also, as the role of agriculture cannot be over emphasized in the economy of any nation so also the role of land cannot be overemphasized in agriculture production. Land is an important factor of production. Land is indispensable to the agriculture business. The important of land lies in the soil, which is the superficial cover of the earth crust, good land are the best insurance for a successful agriculture business. (L. K Opeke, 2006) noted that the word agriculture is carried

out on land and that the economic aspect of land are also very important to viable agricultural policy and development.

Land is the solid parts of the earth surface in which agricultural activities can be practiced. Both plants and animals depends directly or indirectly on land for their survival. It is the source of wealth for all nations and therefore should be worked, managed and left in good state. There is a total of 13.16billion hectares of land in the major continent of the world, but most of it is not suitable for cultivation. About half of it is completely non arable for various reasons such as a very steep slopes, extremely cold weather, swamp land or desert region (Ogunwale, 2004).

About one fourth of the land area supports vegetation that is sufficient in the provision of grazing for

animals but for various constraints cannot be cultivated. This leaves 25% of the land with physical potential arable land (soil types) and their response to management may eventually hold the key to adequate food production in many areas (Ogunwale, 2004).

The total potential arable land in Africa is about 733 million hectares. Nigeria has total land area of 92.38 million hectares of which 80% is arable land, that is 72 million hectares: Currently, 5% of the arable land in Nigeria is under cultivation (Babalola, 2002), of the total land area of Nigeria. Ekiti state occupies about 580,460 hectares. Due to the enormous arable land area of Nigeria and the fact that a large percentage of its population are engaged in agriculture make Nigeria termed an agrarian nation (Fabiya, 1998).

Nigeria's agriculture is land based. Apart from land, a minimum amount of financial capital, farm machinery and non continental inputs are employed in agricultural production. Agricultural production system is extensive, based mainly on shifting cultivation or rotational fallow. There is a consensus opinion (Saul, 1993, Bassette, 2003 and Famoriyo, 2007) that the history of land tenure system in Nigeria can be traced back to the era of strictly held customary land tenure system in which the community jointly exercise control, occupation and use of landed property.

Land is mainly communal owned with limited cases of family and individual ownership. Access to land is a restrictive based mainly on inheritance system. The inheritance systems patrilineal and land may be divided per capital among the male heirs or according to the number of wives with male issues (per stripes). The inheritance system gives rise to scattered holding and farm lands are in non-contiguous plots. Many of their heirs who inherited farmland may not be interested in farming, but still holds on tightly to the land. This is so because of the liquidity premium in landownership in the absence of land taxation. Land performs social security function in rural areas because they can always farm the land to meet their subsistence needs. Those who did not inherit land can however gain access to land but they are made to pay tribute to the land holders. The amount of tribute demanded may be such as a cream off most of the surpluses produced by the tenant. The tenant in most cases do not have secure tenancy and they could be evicted at the whims of land holding families. Tenants therefore have no incentive to invest in science based agriculture because of the certainty that they will not enjoy the full benefits of their investment.

Rural land are not freely alienated by sale, lease or mortgages so that those who did not inherit land cannot easily acquire equity in land. Urban land, on the other hand, is more easily bought and sold. This is in response to the requirement of the capitalist economy, however there are no national wide cadastral survey and ownership of different parcels of land are not properly identified and registered. Land registration is not mandatory, except in a few urban centre. The

predominant system of registration is by deed and this confers no title. Urban and rural lands are subject to a number of abuse and constraints agricultural development efforts of the government and entrepreneurs interested in agricultural enterprise.

Because of major changes necessitated by the technological, political and socio-economic development, the first land law in Nigeria was enacted by the British administration otherwise known as land and native right proclamation No. 9 of 1910. This was followed progressively by other land laws up to the present day use land law known as the Land Use Act of 1978 which came and rationalize land use in Nigeria. It declares all land in Nigeria to belong to the government that is, no individual family or community can own land except the right to occupy and use it. The law provide sales and purchase. These two grew and emanated into land market and included other commercial transaction on rural land and had make land a highly tradable economic commodity because of its value (Ega, 2000).

RESEARCH METHODOLOGY

Study Area

The study was carried in Ekiti State, Nigeria. Ekiti was created out of old Ondo State on October 1st 1996. It is presently made up of 16 Local Government Areas and geographically located between longitude 4°45' and 5°45' East of Greenwich meridian 7°15' latitude 8°5' latitude North of the equator. The state is bounded in the North by Kogi State, in the south by Ondo State and in the west by Osun State. In its entirety, Ekiti State is said to lie in the tropics. The climate of the state is tropical with two distinct seasons; the rainy season which last is from April to October and the dry season from November to March. The tropical climate and vegetation of the state ranges from the tropical rainforest to deprived savannah in the North favoured the cultivation of virtually all tropical crops and the rearing of wide variety of animals.

Generally, the soil fertility diminishes due to natural phenomena of age of the soil and climate (temperature and rainfall), and the continued human activities (farming, deforestation, bush burning etc.). The soils are becoming characterized by a thin layer of organic matter which are predominantly kalolinitic in clay type. The predominant people of the study area are Yoruba, who mostly are natives popularly known as the Ekitis, although, there are cases of more non-natives in Ado Ekiti than any other town in the study area being political and administrative headquarter of the State. Small holder farmers produce bulk of the agricultural produce in the state with the native farmers who acquire the land mostly by inheritance have the largest percentage of the state's arable output.

Sampling Procedure and Sample Size

The sampling technique used was multistage. The study was carried out from six Local Government Areas (Ikole, Oye, Ado, Irepodun/Ifelodun, Gbonyin and Ekiti East LGAs), two from each of the Senatorial Districts. Two towns were selected from each of the Local Government Areas. Altogether, twelve towns were chosen for the study and ten farmers were randomly selected from each town. A total of 120 respondents were sampled.

Source of Data

Primary data were obtained through the use of well structured questionnaire while secondary data were collected from journals, textbooks and other library materials.

Methods of Data Analysis

To achieve the objectives of study, the following methods of data analysis were used;

Descriptive analysis: such as frequency counts, simple percentage were used to examine the pattern of land in the study area while Quantitative method was used to estimate the parameters of regression models. They include Linear, exponential semi-log and Cobb Douglas function. The production function was used to determine the resources use efficiency.

The production function for the farmers is defined linearly thus

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + U_i$$

Where Y = Output of farmer kg/ha

X_1 = farm size in hectares

X_2 = land tenure type dummied inheritance/gift/purchase/communal = 1, Lease/pledge/rent = 0

X_3 = Labour used in man day/hr

X_4 = Planting material (kg/ha)

X_5 = Fertilizer (kg/ha)

X_6 = Immigrant Status of the farmer dummied as indigene = 1, Non Indigene = 0

X_7 = Chemical L/ha

U_i = Error term.

Socio-Economic Characteristics of the Arable Crops Farmers

The analysis of the socio-economic characteristics of the respondents is presented in Table 1. The study revealed that the respondents were mostly male (77.5%) with majority (80%) of them married and relatively young people with about 50.8% having ages more than or equal to 50 years. It was also revealed that 76.67% of

the farmers indicated subsistence as their purpose of farming with relatively high education since about 71.30% had secondary education and above. When asked on the immigrant status, 75% of them indicated that they were native.

Type of Land Ownership Rights and Problems of Land Acquisition of the Farmer

Table 2 indicated that 42.5% of the farmers owned less than 1.9 hectares while 55% of them were using less than half of their total farm land for production. The Table further revealed that 60% acquired their land through inheritance while 50.8% of the respondents had more than one farm site while 49.2% of the respondents had only one farm site. The results on problems facing farmers on land acquisition were reported in multiple responses form. Among the most prominent problems reported are; fragmentation (90.8%), inaccessibility of land to non-indigenes (86.7%), Scattered farm land (73.3%) and non-usage of land as collateral for loans (65%). Among the arable crops produced in the study area, 49.17%, 25% and 20% of the respondents indicated yam, maize and cassava respectively.

Pattern of Land Use in the Study Area

In table 3 the percentage of the arable crop land use is 65.83%, permanent crops like coca, coffee, citrus, oil palm etc. (24.17%) while only 5% and 4.17% of the respondents reported livestock and forest wool land respectively.

The Resource Use Efficiency of Factor of Production

Production Analysis

The estimate of the production function analysis is presented in the Table 4. The lead equation chosen is the exponential form using criteria – least standard error and high R^2 . The coefficient of multiple determination R^2 , value of 0.8733 indicates that 87.33% of the total variation in the dependent variable is explained by the independent variable, the remaining 12.67% unexplained variation are due to random error and the influence of omitted variables which could also have provided further explanation on the dependent variable.

The result revealed that farm size was statistically significant at 5% while land tenure, labour, planting materials, fertilizer, agrochemicals and immigrant status were all statistically significant at 10% each, implying that these variables greatly influence the output of farmers in the study area. Also, the coefficients of farm size, land tenure, labour, planting materials and immigrant status had positive relationships with output of

Table 1: The Socio-Economic Characteristics of the Farmers

Age (Years)	Frequency	Percentage
<30	24	20
31-40	37	30.83
41-50	25	20.83
51-60	24	20
>60	10	8.34
Total	120	100
Sex		
Male	93	77.5
Female	27	22.5
Total	120	100
Marital Status		
Single	10	8.33
Married	96	80
Divorced	8	6.67
Widowed	6	5
Total	120	100
Educational Status		
No Education	5	4.16
Primary	20	16.67
Secondary	50	41.67
ND/NCE	36	30
Others	9	7.5
Total	120	100
Immigrant Status		
Native	90	75
Non-Native	30	25
Total	120	100
Purpose of farming		
Subsistence	92	76.67
Commercial	16	13.33
Hobby	12	10
Total	120	100
Response		
Yes	30	25
No	90	75
Total	120	100

Source: Field survey, 2015

Table 2: Land Ownership Right and Problems of Land Acquisition

Total Farm Size	Frequency	Percentage
<1.9	51	42.5
2.0-3.9	46	38.3
4.0-5.9	15	12.5
>6	8	6.7
Total	120	100
Fraction of Total Land Cultivated		
< ½	66	55
½	26	21.67
½ - ¾	19	15.83
> ¾	9	7.5
Total	120	100
Fraction of Total Land Cultivated		
Category One:		
Inheritance	72	60
Communal	17	14.17
Gift	7	5.83
Purchase	7	5.83
Category two:		
Lease / Let	12	10
Pledge	5	4.17
Total	120	100
Response to Scattered Farm		
Yes	61	50.8
No	59	49.2
Total	120	100
Problems		
Mechanization is difficult due to fragmentation	109	90.8
Non-indigene cannot acquire land or access to it	104	86.7
Scattered farm land due to fragmentation	88	73.3
Land cannot be used as collateral for loans	78	65.0
Sale of land is not allowed	69	57.5
Permanent crops are not allowed to be cultivated	62	51.7
Problem of bureaucracy	58	48.3
Mechanization is impossible without the permission of the Landlord	45	37.5
The prospective farmers do not have access to the required quantity of land	41	34.2
Incessant increase in the tenant rate	24	20
Allotted land can be revised from the tenant if the head of community dies	20	16.7
Crop	Frequency	Percentage %
Maize	30	25
Yam	59	49.17
Cassava	24	20
Rice	2	1.67
Other	5	4.16
Total	120	100

Source: Field survey, 2015

Table 3: Land Use Pattern in the Study Area

Land Use	Frequency	Percentage %
Arable	79	65.83
Permanent crops	29	24.17
Livestock	6	5
Forest wool Land	5	4.17
Others	1	0.83
Total	120	100

Source: Field survey, 2015

Table 4: Estimate Parameters of Production Functions

Functions	Linear	Semi Log	Cob Douglas	Exponential
Variables:				
Constants	118203 (1.526)	-125271 (1.0.863)	132049 (2.330)	4.983 (10.234)
Farm Size	24258.8** (3.453)	-34998.0** (-6.121)	1.8062 (1.123)	0.2671** (2.650)
Land tenure	20994.1 (1.234)	4478.9 (1.50)	1.3682* (2.032)	0.3135* (2.250)
Labour	110.665 (1.3840)	6788.0** (4.020)	1.0018* (2.522)	0.18021* (2.231)
Planting materials	2614.62** (3.60)	8972.35 (1.33)	1.0382* (2.560)	0.375* (1.99)
Fertilizer	-2085.7** (-4.20)	-20742 (-0.345)	0.9324* (2.324)	-0.0700* (-1.9500)
Agrochemicals	-11.194** (-6.53)	-13240 (-0.456)	0.9998* (2.142)	-0.2002 (-1.4200)
Immigrant Status	1054.2** (2.50)	5872.75* (2.443)	1.273* (1.973)	0.6990* (2.4430)
R ²	0.5674	0.8943	0.4269	0.8733
Adjusted R ²	0.550	0.890	0.413	0.8721
Standard Errors	21.345	34.2453	1.67188	1.67188

* and **Estimates are Significant at 10% and 5% respectively

Source: Field survey, 2015

farmers in the study area. This indicated that an increase in any of these variables will bring about increase in farmers' output while the coefficients of fertilizer and agrochemicals had negative relationship with farmers' output in the study area. This implies that an increase in any of these variables would bring about decrease in farmers' output. From the result, it was clear that a coefficient of multiple determination of 0.8733 revealed that, 87% variations of farmers' output is explained by the independent variables in the equation.

CONCLUSION AND RECOMMENDATIONS

Finding from the study shows that both female and males are equally involved in the arable crop production and they are averagely educated. The arable farmers are faced with varieties of problems of land acquisition. However, the output would increased and sustained if adequate attention is paid to vital variable as access to acquisition and use of arable land is accessible to prospective users. As it could seem from the study that farmers that acquire category II of the tenure type do not have the opportunity to solely make their production decision and this was affecting their productivity and the farmers that were affected mostly were the non natives. Ultimately, land acquisition and its use should be adequately addressed to give room for more output of arable production so as to ensure more food for ever increasing population of Nigeria. It was evident that land tenure systems which did not allow the farmers to make production decision on their own, acquire more land,

offer land as collateral to obtain loan, practice mechanization etc. had adverse effect on the output of arable crop production in Ekiti State. It is therefore recommended that government must seriously address the issue of land acquisition so that prospective farmers have free access to arable land empowered them to solely make their own production decision (in accordance with the principle of land use) without the dictatorship of the landlords.

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