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Analysis of Asset Ownership and Labour Inputs among Farming Households in Ilaro Agricultural Zone, Ogun State

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Abstract
This study focused on analysis of asset ownership and labour inputs among farming households in Ilaro Agricultural Zone, Ogun State. Both primary and secondary data were used for the study. Data were collected through the use of structured questionnaires and oral interview. A total number of 80 farmers were sampled for the study. The respondents were selected by multistage sampling techniques. Descriptive analysis was used to analysis the socio- economic characteristics of the farmers in the study area. Multiple regression analysis was done to determine the effect of analysis of asset ownership and labour inputs among farming households. Also, stochastic frontier production function was used to access the effect of socio economic factors on asset ownership. The findings revealed that 33.8% of the respondents had formal education up to tertiary level and 85% had farming as their main occupation. The stochastic frontier analysis result revealed that increase in educational level, farm experience will decrease the technical inefficiency; and positive coefficient variables will also increase the technical efficiency of the asset ownership. Based on the finds of this study, the following recommendations were made: there is need to design a policy to ensure that farmers have good access to fertilizer through adequate supply and efficient distribution so as to increase productivities. This could be achieved through the expansion of domestic production and the development of rural infrastructure, especially rural roads that can facilitate accessibility at lower cost of the farmers. Also policy attention should also be directed towards providing labour saving technology to ease farm operation.
Keywords: Asset, Ownership, Farm, Labour, Capital

Introduction

Asset ownership is the person or group of people who have been identified by management as having responsibility for the maintenance of the confidentiality, availability and integrity of the asset. The asset ownership may change during the lifecycle of the asset (Coelli 2005). Impact of asset ownership on agricultural productivity cannot be overemphasised in urban and rural communities' development. Control over and ownership of assets is a critical component to well – being. Reregulates from a study on the relationship between ownership and control over tangible assets are keys to agricultural productivity (including land, labour, livestock, capital and machinery). It was concluded that the combination of asset inequality and market failures has negative impacts on growth and that inequalities tend to reproduce inequalities. Asset – based approaches view well-being as a cumulative process, resulting from a life time of stored efforts and accrued wealth. Saving and stored wealth (assets) are necessary for the kinds of cushioning and security needed to exit poverty. This is especially true for poor women, who typically have lower levels of ownership and control over assets than men, who control these assets within the household which is critical to household and individual well – being (Barrett and Reardon 2010).

Assets within households are held individually by the men, women and children who comprise household. Family operation is efficient and tends to dominate over other forms of farm- level organization, because production uncertainty and seasonality in farming (which generate unpredictable and lumpy labour demand), and task complementarily (which limits grain from specialization), both limit the total number of workers that can be effectively employed with a given set of assets. However, the family farm scenario they considered, where a single worker is full residual claimant on farm output and owns the entire farm's assets, is indistinguishable- from a scenario where the single worker owns no farm's assets (Brent 2004). The set of assets a farmer owns condition his incentive for acquiring asset specific human capital, and for taking unobserved actions that affect the market value of the farm's assets (e.g, actual depreciation of machinery). The assets owned by an intermediary condition her benefit from monitoring farmers' behaviour.

Consider a model with two parties; a farmer and an intermediary. The farmer used land uncombination with his human capital and other inputs to produce an agricultural output. This output can be sold to the intermediary or to some third party. The per-unit value of output depends on investment as x and y by the intermediary and farmer. After the investments are made and observed by both parties, the intermediary offers the farmer an incentive contract (Ezedinma 2000)

There are 3 types of farm assets. They are as follows:

Capital asset; financial asset; and intangible assets

- **Capital Asset**: This includes its factory ware house, vehicle, plant real estate represent, equipment,

fixed or capital investment. These are not easily identified with specific return also they do not possess the same degree of liquidity as financial assets.

- **Financial Asset**: This includes issued common stock, the preferred stock and bonds issued by corporations and a government.
  Financial assets have the following characteristics
  (1) easily identify with specific returns
  (2) They are available from wide varieties of sources
- **Intangible Assets**: These include items like loyalty, patent, trademark and contract which can be used to earn profit. It shares the characteristics of either the financial or capital assets in that they may or may not be easily identified with specific returns. They may or may not be liquid (Adegeye & Dittoh, 1985)

Farm labour is the only active and productivity production factor and it constitutes a direct production factor. The quality and quantity labour available to the household in terms of number, educational levels, skill and health constitute the human capital that becomes the basis for constructing households livelihood strategies (Carney, 2005; Ellis 2007; and Scoones & Wolmer, 2002). It also focuses on how to improve worker productivity, the remuneration of labour is supposed to be based on the productivity of labour, since labour supports the livelihood of nearly 90% of the rural production in which most work as full time farmers on their own land, others involved in causal agricultural labour government of Malawi 2000; Mkandawaira 2000. The types of labour used in agricultural productivity can be broadly classified into categories:

(i) Family labour; and (ii) Hired labour

The importance of family labour in farm work and lack of mechanization in agricultural production imply that the availability of family is a prerequisite for a household to increase farm size. The increase in farm size using abundant family is possible only under the condition that land is readily available for the expansion of family's farm (Takane, 2008). Apart from family labour available within the households, labour exchanges among relatives that involved other households were also practiced. Such labour was used for farm tasks that required much labour at a given time. When a house has insufficient family labour to complete the farm tasks, hired labour is used. There are two types of farm tasks in which hired labour was most commonly used. Farm labour that required physical strength such as land preparation and weeding, for these tasks, hired labour was frequently sought both by wealthy households that had enough capital to pay for the labour and by the labour – deficient households such as households headed by female by a female or elderly person who could not fulfil these strength demanding tasks (Golas and Kosera 2003).

Since agricultural productivity plays an integral part in the process of industrialization and development. IFPRI, 2004 also testified to it that countries with high levels of productivity growth and only modest discrimination against their agricultural sectors were successful industralizers, and that countries with low levels of productivity growth and a strong bias against agriculture through trade and pricing policies were unsuccessful industrializers.

Objectives of the Study

The broad objective of this study is to analyse the Asset Ownership and Labour Inputs among Farming Households in Ilaro Agricultural Zone, Ogun State.

The specific objectives are to:

i. describe the socio- economic characteristic of farming households in the study area
ii. examine the factors affecting asset ownership and labour inputs of the farmers.
iii. analyse the effect of farmers socio-economic variables on asset ownership.

RESEARCH METRODOLOGY

The Study Area

The study area is Yewa South Local Government Area in Ogun State, Nigeria. Yewa South Local Government Area is one of the twenty Local Government Areas in Ogun State. It is the second largest after Yewa North Local Government Areas. The local area share boundaries with Yewa North and Ipokia Local Government Areas in North and South respectively and in the west and east by Ifo and Ado–Odo/Ota Local Government Areas. The study area is naturally endowed with a large expense (broad extent) of land measuring about 163,720 square hectares and a population of 168,850 (NPC 2006).

Sources and Methods of Data Collection

Both primary and secondary data were used for this study. Primary data were collected through structured questionnaires coupled with oral discussion from respondents; while secondary data were obtained using past records, journals, magazines, internet and periodic publications; as information related to the study such as socio-economic variables, input and labour cost, labour man–day, gender differentials, farm size, output etc. were properly elicited for the achievement of the objectives.

Sampling Techniques and Sampling Size

Multistage random sampling technique was used to select the respondents for the study. The Local Government

Area is divided into several towns and villages. First stage involved a random sampling of six towns (Ilaro, Owode, Erinja, Idogo, Iwoye, Ajilete) from the Local Government Area, while the second stage involved the random selection of twenty respondents from each of the selected towns and villages, making a total number of 120 respondents sampled for the study.

Methods of Data Analysis

Data collected were analysed through the use of descriptive statistical tools. Descriptive statistics such as percentages, means and frequency tables, was used to analyze the socio- economic characteristics of farmers and various constraints facing farming in the study area.

While, Inferential statistic was equally employed such as multiple regression techniques, production function to examine the factor affecting asset ownership and labour inputs and the effects of socio-economic variables on asset ownership.

Model Specifications

The following four functional regression models, that is Linear, Cobb- Douglas, Exponential and Semi-log were the econometrics models tried, but the best-fit model was used. The forms of multiple regressions are given thus:

Linear: $YD/L = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_9X_9 + e_i$

Cobb Douglas: $LnYD/L = b_0 + b_1LnX_1 + b_2LnX_2 + b_3LnX_3 + b_4LnX_4 + ...+b_9LnX_9 + e_i$

Exponential: $LnYD/L = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + ...+ b_9X_9 + e_i$

Semi–log: $YD/L = Lnb_0 + b_1LnX_1 + b_2LnX_2 + b_3LnX_3 + b_4LnX_4 + ...+ b_9 LnX_9 + e_i$

Where:

Y_1 = Labour Inputs
Y_2 = Asset Ownership
X_1 = Age in years
X_2 = Household Size (persons)
X_3 = Cost of Foodcrop (cultivar)
X_4 = Cost of Fertilizer (naira)
X_5 = Credit Size (naira)
X_6 = Occupation
X_7 = Farming Experience (years)
X_8 = Farm Size (ha)
X_9 = Educational Level (years)
U = Error Term

Effects of Socio-Economic Variables on Asset Ownership

Pearson Correlation was used. It gives an indication of the strength and direction of relationship between two variables which are linearly related. The correlation formular is mathematically denoted as:

$$r = \frac{n\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{(n\Sigma x^2 - (\Sigma x)^2)(n\Sigma y^2 - (\Sigma y)^2)}}$$

Or

$$r = \frac{\Sigma(x_1 - x)(y_1 - y)}{\Sigma(x_1 - x)^2 - \Sigma(y_1 - y)^2}$$

Where:

r = correlation,
n = number of sampled variables
x = independent variables
y = dependent variables
Σ = relationship constant

X_i variables are represented with V_i.

V_1 = Age (years)
V_2 = Household Size (persons)
V_3 = Sex ((Dummy)
V_4 = Occupation (Dummy)
V_5 = Farm Size (hectares)
V_6 = Annual Income (naira)
V_7 = Cost of Fertilizer (naira)
V_8 = Carriage of Farm Produce (naira)
V_9 = Asset Ownership (value in naira)

RESULTS AND DISCUSSION

Table 1: Distribution of Respondents by Socio-Economic Characteristics

Variables	Frequency	Percentage	Cumulative Percentage
Age (years)			
< 30	5	6.3	16.3
31 – 40	12	15.0	46.7
41- 50	23	28.8	68.0
51 – 60	16	20.8	85.5
Above 60	24	30.8	97.8
Sex Distribution			
Male	69	86.3	86.3
Female	11	13.3	100.0
Marital Status			
Single	9	11.3	11.3
Married	54	67.5	78.8
Divorced	2	2.5	81.3
Widow/Widower	6	7.5	88.8
Separate	9	11.3	100.0
Household Size (persons)			
< 1 - 3	16	19.8	14.7
4 - 6	35	43.8	61.3
7 - 9	16	20.0	82.7
10 above	13	16.3	100.0
Educational Level			
No Formal education	8	10	10
Primary School	35	43.8	53.8
Secondary School	27	33.8	87.6
Tertiary	10	12.5	100
Major occupation			
Farming	68	85.0	85.0
Tailoring	4	5.0	90.0
Driving	4	5.0	96.3
Teaching	1	1.3	100.0
Civil servant	3	3.8	
Farming Experience (years)			
≤ 20	6	7.5	60.
21 – 30	45	56.3	90.5
31- 40	22	27.5	100.0
41 – 50	7	8.8	
Methods of Land Acquisition			
Personal Land	5	6.3	6.3
Inherited Land	59	73.8	80.0
Communal Land	8	10.0	90.0
Leased/rent	1	1.3	91.3
Gift	7	8.8	100.0
Planting Varieties			
Local	45	56.3	56.3
Improved	29	36.3	92.5
Local improved	6	7.5	100.0
Sources of Income			
Personal savings	20.6	25.75	25.75
Relative/friends	14.7	18.38	44.13
Farmers cooperatives	15.6	19.5	63.63
Local money leaders	10.11	12.64	76.27
Government agencies	10.9	13.63	89.9
Community bank	4	5.0	94.9
Commercial bank	4.1	5.1	100
Problems Encountered			
Inadequate finance	18.9	23.6	23.6
Lack of storage facilities	15.8	19.6	43.2
Erosion problem	10.1	12.6	55.8
Bad roads	5.2	6.5	62.3
High cost of transportation	8.7	10.9	73.2
High cost of farm inputs	10.3	12.8	86
Inadequate man power	5.2	6.5	92.5
Poor harvesting	6.0	7.5	100
Total	**80**	**100**	

Source: Field Survey, 2014.

From the survey, the age of the respondents has a mean of 50.5 years with range of 25 to 72 years and standard deviation of 12.8 years. A total of 69.6% of the respondents was with the modal age range of 25 to 60 years as shown in Table 1. The implication of these findings is that the majorities of the farmers were within

their prime age of labour productivity and might likely utilize the asset ownership obtained productively. Also, they are expected to be very active and desirous for productivity–oriented opportunities. Farming, like any other business, also require experience and managerial skill which are associated with age.

Sex distribution showed that 86.3% were male while 13.8% were female. This implies that male farmers are more willing to own asset ownership and bold to take risk and withstand difficulties involved in obtaining loan or asset than women. Marital status showed that 67.5% of the farmers were married. This shows that majority of the respondent were settled family people and have family responsibility. It also suggests that they would be desirous of opportunities that could be applied towards increasing their income earning capacity and improving their standard of living

The total household of the respondents comprised of their wife/wives, children and their dependants. This is agreement with the view of Oluwasanmi (2009) who stated that a household consists of a category of people who feed from the same pot. The findings revealed that the total household sizes ranges from 1 to 10 persons. In Africa setting, children and women constitute significant source of labour for small- scale farming.

Education is an important factor in the recognition and utilization of investment opportunities. The high preponderance of respondents with formal education might be associated with the realization of the advantages of enhanced production through provision of non-farm by more educated persons and effective utilization.

Majority of the respondents (85%) have farming as their major occupation, while others involved in non-farm activities as sources of their income. The farming experience of a farmer can be a useful guide in the use of inputs and in taking farm management decision. Data obtained from the survey showed that the mean farm experience about 27 years and standard deviation 10.44 years with a range of 3 to 50 years. This means that most farmers sampled were well experienced in farming business. This finding implies that the farmers might be able to make right decisions on the use of productive inputs adequately. The prevalent method of farmland acquisition in the study area was by inheritance. The major sources of income which the farmers made use of include cooperative societies, friends/relations, community banks and government sponsored credit institutions among others. Majority of respondents used loans (74.25%) while others (25.75%) used personal savings. Income has a direct, positive and significant relationship with the farm output.

The farmers identified a number of factors which constitute major obstacles to their production activities. These problems are inadequate finance, lack of storage facilities, erosion problem, bad roads, high cost of transportation, high cost of inputs and labour, inadequate farm power are major impediments to food crop production in Ilaro Agricultural Zone. Efforts must be made to improve the technology used and make adequate fund available for farmers' production in order to increase their farm output

Factors affecting the Labour Inputs and Asset Ownership of the Farming Households

There are various factors influencing farmers' labour inputs and asset ownership such as indicated in the regression table as independent variables and its consequent effect on farm output. The result of the Regression analysis for the postulated labour input and asset ownership is presented in Table 2. Based on the correct signing of the explanatory variables significance of regression coefficients, the value of R^2 and Least Standard Error, the Linear functional form was selected as the best fit for the model. From Table 2, it could be deduced that the explanatory power of 99% and 77.9% of the variations in farm labout input and asset ownership of the farmers is explained by factors influencing the labour input and asset ownership. Thus, the regression has a good fit implying that the most explanatory variables are included in the model.

Also, the F-values of 340,037 and 14.201 were significant at 99% level of confidence. Thus, it indicates a strong influence of the selected nine variables on the labour inputs and asset acquisition by the farmers in the study area.

It was found out that the coefficient of age, household size and educational level are negative and not statistically significant. This implies that the most farmers in the study area are aged, over-utilizing the household members and with low level of education, credit size, few available farm land which affect the acquisition and the use of skilled labour to improve their production output. While the reduction in cost of farm cultivars, fertilizer and increase in farm experience enhance the farmers' income and increase his willingness to acquire more hired labour for farm use.

On the other hand, the coefficients of all the variables under asset ownership are positive and statistically significant at 5% except cost of fertilizer and farmland. A unit increase in these variables will increase farmers' willingness to own and acquire more useful assets for farm production, thereby increase their farm profit.

Table 2: Factors Affecting Labour Input and Asset Ownership of the Respondents

		Labour Inputs		Asset Ownership	
Variable Code	**Variable Name**	**Regression Coefficient**	**Standard Error**	**Regression Coefficient**	**Standard Error**
β_o	Constant	0.388 (0.041)	9.589	- 24073.981 (-0.427)	56419.946
X_1	Age	- 0.004 (-0.166)	0.018	0.008 (0.072)	109.750
X_2	House hold size	0.091* (3.774)	0.098	0.471** (4.210)	585.180
X_3	Cost of food crop	- 0.007 (-0.260)	0.003	0.059 (0.461)	15.790
X_4	Cost of fertilizer	- 0.23 (-1.069)	0.001	-0.158** (-1.538)	2.733
X_5	Credit Size	- 0.58 (-1.827)	0.308	0.259** (1.766)	1839.571
X_6	Occupation	0.075* (3.041)	0.673	0.487** (2.653)	249.555
X_7	Farming experience	0.971 (23.457)	0.42	0.363** (2.790)	515.875
X_8	Farm size (Ha)	- 0.032 (-1.084)	0.86	-0.399 (3.849)	1891.235
X_9	Education level	- 0.018 (-0.701)	0.317	0.217 (0.345)	21.87
Variance Parameters:		R = 0.966, R^2 = 0.993; Adjusted R^2 = 0.990; F-Value = 340.037*		R = 0.915, R^2 = 0.838; Adjusted R^2 = 0.779; F-Value = 14.201*	

∗ = significant at 1%; ∗∗ = significant at 5%; ∗∗∗ significant at 10%
Source: Field Survey, 2014

Effects of Socio- Economic Characteristics on Asset Ownership

Data in Table 3 showed that correlation matrix of effect of socio-economic characteristics on asset ownership. It was found out that the most of the variables are positive and statistically significant.

Age: farmers' age in correlation with asset ownership gives a value of r = 0.550 which is positive. This means that there is positive correlation between age and asset ownership. It means that the higher the age, the more the willing to acquire assets.

Household size: farmers' household size in correlation with asset ownership gives a value r = 0.496 which is positive. This means that there is weak positive correlation between household size and asset ownership. If household size increases, there will be reduction in available income for farmers' family to acquire more working assets.

Sex: Asset ownership in correlation with sex gives a coefficient value r = - 0.277 which is negative and significant. It means that sex does not influence the asset ownership

Occupation: Occupation in correlation with asset ownership gives a value of r = - 0.233 which is negative and significant.

Farm Size: the farm size in correlation with asset ownership gives a value of 0.509 which is positive. This means that there is a strong positive correlation between farm size and asst ownership. It means that the more farm size farmer have, the more wiliness to acquire assets.

Annual Income: The coefficient of annual income was found to be positive and statistically significant at 5%. In correlation with asset ownership r = 0.520. This implies that as the annual income increases the more the willingness of the farmers to acquire more durable, fixed inputs on the farms to enhance production.

Cost of Fertilizer: The coefficient was found negative and non-significant. This means the higher the cost of input (fertilizer) the lesser the available money for the farmers to purchase other fixed assets.

Carriage of Farm Produce: The correlation matrix index showed that r = 0.248 which indicates negative relationship between the variable and asset ownership. The higher the carriage cost the lesser the tendency that the farmers will have to acquire more assets for the production.

Table 3: **Correlation Matrix of Effects of Socio- Economic Characteristics on Asset Ownership**

	V_1	V_2	V_3	V_4	V_5	V_6	V_7	V_8	V_9
V_1	1.00								
V_2	0.481**	1.00							
V_3	-0.124	-0.217	1.00						
V_4	-0.165	-0.339**	0.169	1.00					
V_5	0.347**	0.193	-0.064	-0.120	1.00				
V_6	0.520**	0.414**	-0.221	0.25	0.401**	1.00			
V_7	-0.047	0.022	-0.316	0.143	-0.86	0.272	1.00		
V_8	-0.248*	-0.136	-0.172	-0.152	-0.213	-0.042	0.355	1.00	
V_9	0.550**	0.496**	-0.277*	-0.233	0.509**	0.695**	0.266	0.388**	1.00

Source: Field Survey, 2014

Where:

V_1 = Age; V_2 = Household size; V_3 = Sex; V_4 = Occupation; V_5 = Farm size; V_6 = Cost of Fertilizer; V_7 = Annual Income; V_8 = Carriage of farm produce; V_9 = Asset ownership

Correlation Matrix Indices/Parameters

r = -0.1 to – 0.5 = Weak negative correlation

r = -0.5 to -0.9 = Strong negative correlation

r = 0.1 to 0.5 = Weak positive correlation

r = 0.5 to 0.9 = Strong positive correlation

r = 1 = Perfect correlation

Conclusion and Recommendations

The study examined asset ownership and labour inputs among farming households in Ilaro Agricultural Zone, Ogun State. In conclusion, it was found out that socio-economic characteristics and other farm demographic variables are the determinants of asset ownership and labour inputs. There was increase in farmers' productivity as result of owning more fixed and variable assets. Underutilization of hired labour was identified which consequently affect farmers output. Generally, the farmers' profitability depend on farm size, the total quantity of inputs, total variable expenses, total amount of family and hired labour, location of the farms, total cost of fixed inputs. These variables have positive effect on the asset ownership and labour inputs respectively. To achieve a higher level of crop production other farm production and non-farm activities, there is need to increase the asset ownership and labour inputs in the study area. It is also recommended that there should be policy intervention that facilitates farmers' access to improve in labour inputs to enhance efficiency and competitiveness in production. Closely associated with policy, the provision of adequately trained and equipped extension workers for disseminating extension messages has the potential of raising efficiency. Education should be provided for risk, pests and disease that are often after the production output

REFERENCES

Adegeye, A. J and Dittoh J. S. (1985). Essentials of Agricultural Economics. Impact Publishers. University of Ibadan. Pg. 50 – 62.

Barrett, C.B. and Reardon, T. (2010). Asset, Activity and Income Diversification among Africa Agriculturalists: Some Practical Issues In: Income diversification and Livelihoods in Rural Africa: Cause and Consequence of Charge. Special Edition of Food Policy.

Brent, T. M. (2004): Asset Ownership and Incentives in Agricultural Production, Department of Economics, Iowa State University. pp 1- 5

Carney, D. (2005). Implement the Sustainable Rural Livelihoods: What contribution can we make? Department for International Development, London.

Coelli T. J. (2005). A Guide to Frontier Version 4.1: A Computer Program for Frontier Production Function Estimation. CEPA Working 2005/06, Department of Econometrics, University of New England Armidale.

Ellis, F. (2007). Rural Livelihood Diversity in Developing Countries: Evidence and Policy Implications. Overseas Development Institute Natural Resource Perspectives, No.40. London: Overseas Development Institute.

Ezedinma, C. I. (2000). Farm Resource Allocation and Profitability of Arable Crop Enterprises in the Humid Forest Inland Valley Ecosystem: A Case Study of Ozu Abam in Sourthern Nigeria. UNSWA. *Journal*

of Agriculture, Vol. 9 pp.48 – 56.

Golas, Z. and Kozera M. (2003).”Technical, Economic and Social Condition in the Variation of Worker Productivity Individual Farms’’. Annual Agricultural University in Poznan. No CCVII, pp 51- 70.

Government of Malawi. (2000). New Employment Act, Government Publication, Zomba.

IFPRI. (2004). Assuring Food and Nutrition Security in Africa by 2020. Proceedings of an All-Africa Conference, 1-3 April 2004, Kampala, Uganda, 229 pp. Institute, Washington, D.C

Kormawa, P.M. and G. Asumugha (2002). Report submitted to FAO. Management, Marketing and Rural Finance Service (AGSP) Gender and Development Service (SDWW).

Mkandawire T. (2000). The Labour Market in Malawi, Ilo, Geneva. Switzerland.

Reardon, T., Taylor,J.E., Stamoulis, K., Lanjouw, P. And Balisaca, A. (2000): Effects of Non-Farm Employment on Rural Income Inequality in Developing Countries: An Investment Perspective. *Journal of Agricultural Economics*, 51 (20 Scoones I (1998). Sustainable Rural Livelihoods. A Farmer Work Foe Analysis. IDS Working Paper N., 72. Institute of Development Studies, Brigthon.

Scones I. And W. Wolmer (2002). Pathways of Change in African: Crops Livestock and Livelihoods in Mali, Ethiopia and Zimbabwe. James Currey and Heinemann, Oxford and Portsmouth.

Takane, T (2008). Customary Land Tenure and Inheritance Rules among Small-holder Farmers in Malawi. Journal of Southern Africa Studies, 34 (2): 269-291.