

Women's Access to Land and Economic Empowerment in Selected Nigerian Communities

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Abstract

Despite various land policies that prescribe rights to land in many societies, women remain marginalized in access to and economic utilization of land. This is widespread in rural communities where informal institutions such as customs and traditions subsist. In most of these communities, the patriarchal structure of families is championed by the informal institutions that support male dominance. This study focuses on economic empowerment of women as it encapsulates sustainable wealth of women. It provides answers to two main research questions: a) what kind of relationship exists between land access and empowerment of women? And b) how important are individual and household attributes in informing women's empowerment through land rights? The empirical results of this study provide some new insights as they demonstrate how land rights influence women's economic empowerment. The study also finds that women's earning capacity reduces when they take up the responsibility of becoming the heads of households and that their income increases as they become more educated.

Key words: Access to land; Economic empowerment; Gender equality; Land rights; Women

1. Introduction

Studies have been carried out on women's contributions to household and national economy,

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especially in the area of agriculture and food security (Enete and Amusa 2010; Fabiyi et al. 2007; Sofa Team and Doss 2011). One area that lacks adequate research is gender access and ownership rights to land and its implication on the wealth⁶ of women. Theoretically, the Nigerian land use Act of 1978 gives men and women equal right to access and own land; in practical terms, women unlike their male counterparts are handicapped in making decisions on the acquisition, use and disposal of the very important piece of real estate.

The implication of lack of land access and ownership rights have tended to compromise women's access to credit facilities, among others, due to lack of collateral. Some other implications include deterrence of investment opportunities and inhibition of land transactions that accounts for loss of gains from such transactions (Besley and Ghatak 2009; Isaksson 2011). In developing countries, land provides secured income opportunities for the rural poor and often constitutes the primary source of livelihood (Osabuohien 2014). Rural poor can use their lands for agricultural activities, sale or lease and earn economic returns from such activities. More so, women who constitute the majority of the rural poor, (Danziger 2009) more often depend on land for sustainability.

Women, requiring land for sustainability or put differently, enhancing women's economic empowerment through land right security, has received much policy attention. Efforts have now been put in place to ensure women's land rights in new land-registration and formalization programs (Doss, Meinzen-Dick and Bomuhangi 2014). The Ugandan case has been mentioned, where the government is putting up measures to ensure a far-reaching legal framework to address a history of often land-related conflict and tribal division, end gender discrimination in land access, and provide a guideline to bring about optimum use of available land resources to contribute to social and economic development. Among the most prominent of these frameworks is the recently launched program that addresses land tenure regularization (Ali, Deininger and Goldstein 2014). These efforts are even more prominent due to the rapid increase in the rate of foreign land acquisition around the world and the consequent displacement of land owners of their inheritance (Cotula et al. 2009; Deininger et al. 2011).

Not neglecting that women are most affected in the case of unsecured land rights, especially due to discrimination against their access to, ownership and control of the land (Kleinbooi and Lahiff 2007), it is important to note that secured land rights have their consequences. This includes that it has the potential to create a high risk of elite capture of large land areas with efficient and inequitable outcomes⁷. Furthermore, it can lead to reduced engagement in other human development activities like education, since rural dwellers can take the sale of land as their means of livelihood and withdraw their educational plans. Despite these adverse outcomes, it cannot be denied that the benefits of land rights exceed the adverse implications. Most especially, women currently hold ownership to less than two percent of the global land (Allendorf 2007).

To confront the issue of land rights, however, there is budding empirical evidence that has observed the micro implication of land rights on women (e. g. Doss, Bomuhangi and Meinzen-Dick, 2014; Isaksson, 2011; Whitehead and Tsikata, 2003). Interestingly, some of the conclusions of these studies are fragmentary, and their conclusions are targeted at land security and at best, some have focused on implication of land tenure on children's welfare (Allendorf 2007). Thus, we ask an important question, whether land rights even improve the wealth of women; this is

⁶In this study, wealth and economic empowerment are used interchangeably because both of them represent the economic sustenance of the individual.

⁷See Holden and Otsuka (2014).

because not much attention has been aimed at assessing the impact of land rights on the wealth of rural women in Nigeria. The closest study in this regard is Deininger, Ayalew and Yamano (2006), who examined the economic impact of legislative revision of land rights in Uganda. However, this current study differs markedly in some respect: we are focusing on customary land rights and wealth of women, while they focused on knowledge of new land laws in Uganda and its effect on land security and transferability.

The present paper has valuable contributions. For the global drive towards enhancing women's right to land to have more credence, it is important to understand how these rights affect the well-being of women, and in this case, wealth. This should help guide the policy formulation processes and provide a point of reference, based on empirical underpinnings, for the need to enhance women's land rights. Importantly, an improvement in women's access to land and land rights has a broad consequence on the attainment of the reduction of national poverty. Since women in most African countries are more prone to poverty, an understanding of the role of land in enhancing their welfare and wealth will be insightful for policy action.

Moreover, a study like this that emphasizes women's right from a micro perspective will have important implications for research. In particular, it highlights the micro dimension to the implication of land on individual wealth, unlike other studies that have reached conclusions on aggregate data. Osabuohien (2014) elaborately describes the need for more studies that focus on in-country dynamics and implications of land issues. There are diverse implications of women's limited access to land such as a shift in the household dynamics, roles and income generation that is prevalent based on the fact that in most of these households, women fend for the family, among others. Thus this study focuses on economic empowerment of women, which implies a broad development process that facilitates self-reliance and self-esteem through allowing active participation in development decision-making and achieving gender equality. The main objectives include: to examine the direction of relationship between women access to land and their economic empowerment; and explore how individual and households attributes interact with women's economic empowerment through land rights.

In addition, Nigeria is an emerging key player in the African continent given its socio-economic and political standing, which makes research findings from her insightful for other African countries. Since women in most African countries are more prone to poverty, an understanding of the role of land in enhancing their economic empowerment will be insightful for policy action. In addition, from six pillars' of the Common African Position (CAP) on the Post-2015 Development Agenda adopted January 31, 2014 at the 22nd Ordinary Session of the Assembly of Heads of State and Government of the African Union; prominent among them is the issue of structural economic transformation and inclusive growth as well as people-centred development. The remainder of the paper is distributed as follows: a brief literature review is presented in the second section, while the third section contains the data and empirical strategy that is applicable for this study. We present the empirical results and discussions in the fourth section, and then followed with conclusions in the fifth section.

2. Literature Review

Across the literature, the concepts of *gender* and *land* are two very important issues that have engaged the attention of development scholars. In many African societies, land represents an important cultural resource or a productive factor and capital asset. However, the land rights are an important factor that determines the ability of land to materialize into economic values. By land

rights, it implies the variety of legitimate claims to land and the benefits and products produced on that land. This speaks about an individual having the right to derive economic or non-economic value from the ownership and usage of land.

Some African countries are driving at empowering women's access to land, but the outcomes of their programs vary. Ali, Deininger and Goldstein (2014), evaluated the short-term impact of a pilot land regularization program in Rwanda using a geographic discontinuity design with spatial fixed effects. This program was aimed at regularizing land rights in Rwanda and among their findings include that the program has improved land access for legally married women and has prompted better recording of inheritance rights without gender bias. They also found that the program was associated with a larger impact on investment and maintenance of soil conservation measures, especially for female headed households. The reason why the program had much impact on women, especially female headed households, is that this group had previously suffered from high levels of tenure insecurity, which the program has addressed to some extent.

There is the need to consider the effect of the patriarchal social system on women's perspective to land issues. The patriarchal societal system already subjugates women's rights, and improving their land tenure will be an avenue to improve their economic value. Interestingly, these women already have a conservative attitude towards land issues and would rather decline from land issues than become involved. Kleinbooi and Lahiff (2007) agree and traced women's conservativeness to the patriarchal system of land holding. They also found that few women were willing to challenge the highly gendered nature of land rights within families, and women generally feel excluded from public processes around land.

Studies on land rights and its implication on women have reached diverse conclusions. Nidhiya, Yana and Huong (2014) studied women's land rights and their implications on children's human capital in Vietnam. They used a matched household sample from Vietnam's 2004 and 2008 Household Living Standards Survey, and found that female-only held land-use rights decreased the incidence of illness among children, but increased their health insurance coverage, raised school enrolment, and enhanced household expenditures toward food and away from alcohol and tobacco. Allendorf (2007) earlier studied how women's land rights promote empowerment and child care in Nepal using the 2001 Nepal Demographic and Health Survey and concluded that women that own land are significantly more likely to have the final say in household decisions, which is one of the indicators of empowerment. Similarly, children from mothers who own land are significantly less likely to be severely underweight.

Wanyeki (2003) proposed that women need not have a sole right to land but they can co-own it, which can also affect their economic values. The author found that women may co-own land with their husband, though this poses some difficulties for the women, especially when women have different priorities from their husband, they run the risk of being handicapped in land decision making on acquisition, use and disposal of this very important real estate. Further discrimination against the less powerful group tends to arise from these biases, so the recognition of equal rights for women and men is fundamental to any process attempting to rectify imbalances that result from privileging one group over the other. Doss, Meinzen-Dick and Bomuhangi (2014) cautioned against the notion that women can co-own land with their husband. They observed from the study of Ugandan households that, though many households admit that land are co-owned with their women, women are less likely to be listed on ownership documents and have fewer rights over the land.

3. Data and Empirical Strategy

Overview of the Study Site—Ota

Land is an important commodity for *Ota* indigenes. This is partly because of the large span of land with a small population compared to other settlements in Nigeria. Approximately, *Ota* occupies a land area of 1460 square kilometres (360,774 Acres, i.e. 2,164, 644 plots⁸), with a population of about 500,000 people, implying that the ratio of the persons living in *Ota* to the number of available plots is about 1 person to 4 plots. More so, since *Ota* is situated near the boundary of Lagos State and has steadily grown to be the largest industrial town in Ogun State, one of the 36 states in Nigeria (Egwakhe and Osabuohien, 2009), there is no questioning why the demand for their land is high.

The location of this study presents an insightful contribution to the discourse on land rights. *Ota*, which is our focus community, is a rural location in Ogun State (one of the South-Western states of Nigeria) and has steadily grown to be the second largest industrial town in Nigeria due to land availability for foreign investors. More than 80% of *Ota* indigenes have ancestral lands that are used for commercial activities and livelihood. This has given rise to the maxim, “As crude oil is to the *Niger-Deltans* so is land to the *Ota* people,” which depicts the importance of land as a principal economic resource to this locality. Among the main commercial activities that land is used for, is its sale to land buyers. This has remained the stock of trade for the indigenes and has degenerated into some social viles like: resale of land to other investors causes a series of lawsuits and sometimes, irresolvable disputes; *thuggery*, which arises when there is a forceful reclaim of land that has earlier been sold; and peddling of weaponry to the youths for community clashes that are mostly related to land issues.

Prior to the era of industrialization and manufacturing activities that *Ota* is known for today, agriculture was the mainstay of the economy. However, most of the lands in *Ota* are put forward for sale by the indigenes popularly called *Omo onile*—a colloquial expression for the child of the owners of the land—and this has become a booming economic activity. This is despite the large concentration of industries besides Lagos state. It suffices to note that the industrial development of *Ota* which provides employment opportunities for the increasing population of job seekers have attracted a high rate of human traffic and consequent hike in prices of residential accommodation and general cost of living. On the other hand, increasing economic activities in *Ota* have resulted in rapid infrastructural development, in terms of availability of basic infrastructure (pipe borne water, electricity and good roads). The major challenge of the people is the increasing demand for housing, which is being attended to by the establishment of Government Housing Estates in addition to the effort of private developers.

Data

The data for this study are part of a larger project conducted in 2014 to understand the land issues in *Ota*, Ogun State, Nigeria. The data were collected during the project from a total of 22 communities in *Ota*.

The quantitative data include household and intra-household surveys, where both household heads and individuals that are living in the household were those that constitute the survey targets. The questionnaires were administered to a total of 498 individuals; 145 women

⁸This is about 146, 000 hectares (ha) using 1acre = 0.40469 ha.

and 338 men in the 22 communities. The communities are defined household settlement areas that are recognized by the local government. In each of the communities, individuals were randomly selected without any particular sequence. This implies that any individual, who lived in any of these target communities, and they were made to fill the questionnaire. The reason for this is that the *Ota* region did not present an orderly distinction of the districts; this therefore makes it difficult to mark the districts and ensure that people from the districts are made to participate in the survey. We adopted the approach of making the potential respondent fill in the names of their community when filling the questionnaire.

Table 1 presents the list of the communities that were covered in the survey. From the Table, it is observed that the number of respondents per communities was unevenly distributed. This is because, apart from some challenges that were encountered during the conduction of the survey such as illiteracy, the sizes of the communities also differ, which was taken into consideration⁹.

Table 1: List of Communities Surveyed and the Number of Participants

s/n	Community	Survey Participants	s/n	Community	Survey Participants
1	Ado-Odo Ota	139	12	Atan	34
2	Araromi Illupeju	1	13	Ayetoro	3
3	Asore	5	14	Benja	4
4	Iyana Iyesi	32	15	Dada Asalu	5
5	Afobaje	12	16	Davour	68
6	Agbala Itura	6	17	Egushi	13
7	Agbodike	15	18	Elejigbo	8
8	Aiyekoto	1	19	Fatokun	14
9	Alapoti	21	20	Ileriogo	14
10	Alesigbo	32	21	Iju	15
11	Asore Ala	14	22	Onibuku	42
		Total			498

Source: Field Survey (2014)

The survey was such that one member from each household was asked about land issues that are peculiar to their household and ancestral roots. For instance, questions like are there any family rules that relate to how land is distributed and who controls the land were asked. We ensured that the individuals that were selected were adults or youths that are informed about these issues. Some other questions relating to the household, such as household assets, consumption pattern, community factors, were also asked to the respondents. There were also provisions for the respondent to describe the community associations that govern land issues. The survey instrument was created in English and we employed the services of research assistants, who were indigenes and could ask the questions in the local dialect.

Of our primary respondents 69.98 percent were male, while 29.81 percent were female. The mean age of the male gender was 48 years, while for women, 44 years. In terms of land rights, the *Ota* community does not out-rightly discriminate on who owns the land based on gender. Although, this is not a general norm and practice, but most times, family rules are prominent in presiding over this process. Further statistics reveal that 87.97 percent of the male gender had the right of decision over their lands, while 81.13 percent of the women also have right of decision

⁹Some respondents held some suspicion that the interviewers were government officials, who needed the information for revenue drive or land reallocation.

over their lands. This reverberates the fact that gender discrimination over land is not a major issue in *Ota*. Other relevant statistics, across gender, are presented in Table 2.

Table 2: Descriptive Statistics of Respondents from the Communities Studied

	Men	Women
Gender (%)	69.98	30.02
Age (Average Years)	48.00	43.00
Children (Average Number of Children)	4.00	4.00
Age of children (Mean Age)	15.00	15.00
Household Head (%)	97.00	51.00
Mean years in Ota	22.00	18.00
Education-University (%)	38.48	37.59
Secondary (%)	46.67	46.81
Lower Education (%)	14.85	15.6
Household Occupant (Mean Number)	5.00	5.00
Own land in Ota (%)	86.48	85.16
Plots Owned (Mean Number)	4.00	2.00
Right Over Land (%)	87.97	81.31
Legal Right-Certificate of Occupancy (%)	26.88	34.55
Monthly Income (Mean Amount in Naira)	69,727.00	64,175.00

Source: Field Survey (2014)

Empirical Strategy

The aim of this paper is to examine the existence and patterns of the effect of land rights on the wealth of women in *Ota*. To achieve this objective, we hinged on the analytical approach of Chiripanhura and Nino-Zarazua (2013), which is the latest empirical study, based on our knowledge, on household welfare in Nigeria. The authors developed an empirical model that takes a logistic nature, where the outcome variable is welfare, which is expected to be explained by the individuals' characteristics (age of the respondent and whether the respondent is the household head) and household characteristics such as the dependency ratio of the household. We go further by including a land rights variable in the model and other forms of household characteristics. Thus, the following benchmark equation is:

$$Y_i = \beta_0 + \beta_1 Lr_i + \beta_2 PA_i + \beta_3 HH_i + \Phi_i + e_i \quad (1)$$

This signifies that the wealth (Y_i) of women in *Ota*, is informed land right (Lr), personal attribute of the individual (PA) and household attribute (HH), allowing for community fixed effects (Φ_i).

The outcome variable ($wealth - Y_i$) is expected to improve with land rights. In this context, we measured the wealth of individuals as the average monthly income. This seems like the closest and most commonly used measure to determine the wealth of individuals in a given setting. This variable is called *wealth1*. From our data, women earn an average income of 64,175 Naira (about US\$399.47), which is marginally lower than that of men with the value of 69,727 Naira (about US\$434.03) as earlier shown in Table 1.

For robustness, we apply the strategy of Asiedu, Asiedu and Owusu (2012), who examined the socio-economic determinants of a particular set of adults in Lesotho, Malawi, Swaziland and Zimbabwe. They measured wealth by using a household index that comprised household ownership of consumable durable goods, source of drinking water, type of toilet facility and ownership of agricultural land. In this study, we followed a similar pattern to develop an index called *wealth2*¹⁰, where we included the following variables: stock of household assets, type of

¹⁰The household assets is a count variable of the assets in the respondents' household. The assets of interest include

toilet facility, how refuse is disposed, number of rooms in the apartment of the individual and method of cooking. For an overview, Table 3 presents the statistics of the items that was included in the index-*wealth2* across gender.

Table 3: Items Included in the *Wealth2* Measure

	Male	Female
Household Assets (mean of the Count of Assets)	1.02	1.03
Toilet Facility (% of Modern Flush, Water Closet)	73.73	74.45
Refuse Disposal (% using Central Refuse Dump)	59.10	59.31
Rooms in the Apartment (% living in a self-apartment)	57.02	59.16
Methods of cooking (% using gas/electric cooker)	24.48	35.71

Source: Field Survey (2014)

The explanatory variables include land right (*Lr*). Land right was measured following the approach of Isaksson (2011), who studied the determinant of unequal property rights in Uganda. The response to the question “Do you perceive yourself as having right to sell, mortgage or lease total land or owned land,” was used as the measure of land right. This variable is a dummy variable that takes the form of 1 if the response is “yes” or 0 if the response is “no.” Some other measures like the response to the question “how the land was acquired: bought, inherited or given as a gift,” would have been used as a measure of land right. However, some concerns prod this measure. The main concern is that an individual that acknowledges that the land was purchased, inherited or given may not necessarily signify right over the usage of the land. Some family rules can influence the rights over the land apart from the means of acquiring the land. Thus, our measure is further authenticated.

The covariates include personal attributes of the individual (*PA*). In this study, we included the position of the individual in the household (1, if the head and 0 otherwise), age of the individual, the educational attainment of the individual. These covariates were included based on consensus that are being reached on the factors that inform individuals’ earning capacity, income or welfare (Asiedu, Asiedu and Owusu 2012; Dahl and Lochner 2012; Sesabo and Tol 2005). The other covariate-household composition controls for household size (number of individuals living in the household), age composition (the number of children living in the household) and the number of years that the household has been residing in *Ota*. In line with logical reasoning, we cannot rule out that these household compositions affect the wealth of the household. For instance, a household with more number of occupants (household size) and children will incur more expenditure on sustenance and welfare, which will affect the wealth of the household. Likewise, a household that has had longer tenure in *Ota* will be able to understand the economic condition of the settlement and develop counter strategies to sustain their economic outputs. This may not be applicable in all cases, but at least it reduces the problems of unexplained variation in the model.

motor cycle (popular means of transportation in these communities), car, TV set, fridge, air conditioner, beds and mattresses; generator sets (popular means of supply of electricity in these communities).

The baseline regression model (equation 1) was estimated using the Ordinary Least Square-OLS regression with community-fixed effects and heteroscedasticity-corrected standard errors. This estimation approach is considered relevant because it controls for unobserved community heterogeneity that can likely occur due to time-invariant community characteristics, which include: community by-laws, land associations dictates, and other informal institutional set-ups that are prevalent in the sampled communities. Since these heterogeneities are likely going to affect the land rights and perhaps, the extent of wealth in the sampled communities; then it is essential to apply a technique that incorporates these issues in its estimation process.

4. Empirical Results and Discussions

To begin the empirical estimations, we performed a pre-test to observe the associations that exist between the variables and to determine if there is possible multicollinearity that can affect the efficiency of our estimated outputs. The correlation analysis is presented in Table 4, and there was no issue of multi-collinearity from the estimates in the Table. Most of the variables behaved as expected, except for land rights, which exerts a negative association with the two measures of wealth. However, the exact relationship will be established subsequently from our empirical estimations.

Table 4 Correlation Test Among Variables

<i>Variables</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) <i>Wealth1</i>	1.000								
(2) <i>Wealth2</i>	0.284	1.000							
(3) <i>Land right</i>	-0.001	-0.075	1.000						
(4) <i>Age</i>	0.108	0.060	0.220	1.000					
(5) <i>Household Head</i>	0.010	-0.062	0.182	0.269	1.000				
(6) <i>Education</i>	0.396	0.413	-0.120	-0.202	-0.013	1.000			
(7) <i>Household Occupant</i>	-0.016	0.032	0.162	0.232	0.014	-0.123	1.000		
(8) <i>Age Composition</i>	-0.059	-0.090	0.179	0.521	0.079	-0.264	0.400	1.000	
(9) <i>Years Residing in Ota</i>	-0.220	-0.075	0.067	0.387	0.169	-0.349	0.034	0.271	1.000

Source: Field Survey (2014)

Baseline Results

The result from the baseline regression analysis is presented in Table 5. Considering our variable of interest-*land right*, we could not establish a significant effect on the wealth of women in *Ota* communities. This was consistent in all the columns, even when we conducted the analysis in a stepwise form and all the variables were included separately in groups. It is important to note that the wealth of the women was measured as their average income. To support this result, we went further to show a chart of the average income of women with and without land rights (see Figure A1 in the Appendix). This result seems to contradict some extant literature such as Allendorf (2007) and Yana and Huong (2014) that land rights enhance women's economic value, especially when considering the average income earned by women.

The behaviour of the other covariates de-emphasizes the role of women becoming household head. The coefficient was negative and significant in the second Column, which connotes that the

women earning capacity, reduces by 0.346 when they take up the responsibility of becoming the household heads. The need for women education is also recalled: the variable reveals that income will increase between 0.552 and 0.496 as women become more educated. The other covariates follow expected signs except for years residing in Ota.

Table 5: Regression Analysis 1

<i>Wealth: Average Monthly Income</i>	1	2	3	4	5
Land Right		-0.108 (0.676)		-0.042 (0.873)	0.027 (0.922)
Age	0.021* (0.006)	0.019** (0.048)			0.026** (0.032)
Household Head	-0.145 (0.385)	-0.346*** (0.063)			-0.318*** (0.100)
Education	0.552* (0.000)	0.496* (0.000)			0.480* (0.000)
Household Occupant			-0.140** (0.011)	-0.093 (0.139)	-0.057 (0.392)
Age Composition			0.068 (0.257)	0.038 (0.593)	-0.009 (0.916)
Years Residing in Ota			-0.019** (0.033)	-0.018** (0.023)	-0.015*** (0.064)
Constant	8.045* (0.000)	8.528* (0.000)	11.371* (0.000)	11.262* (0.000)	8.644* (0.000)
R ²	0.231	0.213	0.100	0.076	0.286
F-Statistics	11.110	5.670	4.110	1.690	4.120
P-value	0.000	0.004	0.008	0.159	0.007

Note: the values in parenthesis are the probability values of the estimates.

The superscripts *, ** and *** signifies the level of significance at 1, 5 and 10%.

Source: Field Survey (2014).

We go further to investigate if our result remains consistent when we use another measure of wealth (i.e. the wealth index as earlier defined) as shown in Table A1 in the Appendix. The variable land right was still insignificant in all the columns in the Table. The insignificant behaviour of our main variable land right cannot be disassociated from the peculiarity of the community that was investigated. As earlier stated, most of *Ota* dwellers do not use these lands for productive activities, and they even sell the lands to meet urgent needs. If this be the case, then it is not so surprising why the variable did not significantly influence the income of women. Most women that even make use of the land for agricultural activities are older women and they productively use these lands for small scale crop production, which they finally sell at the community market¹¹.

Table 6: Regression (Including the Interactive Terms)

	1	2	3	4	5
Household Head	-0.337*** (0.100)	0.051 (0.740)	-0.318*** (0.087)		
Education	0.498* (0.000)	0.451* (0.000)	0.496* (0.000)		
Household Occupant	-0.063 (0.348)			-0.140** (0.011)	-0.102 (0.156)
Age Composition	0.032 (0.694)			0.068 (0.257)	-0.045 (0.605)
Years in Ota	-0.012 (0.114)			-0.019* (0.003)	-0.018** (0.034)
Land Right × Age of Woman	0.010*** (0.089)		0.007*** (0.100)		0.007 (0.224)
Constant	9.236* (0.000)	9.179* (0.000)	9.001* (0.000)	11.371* (0.000)	11.254* (0.000)
R ²	0.264	0.165	0.193	0.100	0.099
F-Statistics	4.360	11.830	6.770	4.110	2.100
P-value	0.000	0.000	0.000	0.000	0.089

Note: the variables—“land right” and “age” are not included because of multi-collinearity that exist when the interactive variable was included. More so, we are interested in the indirect effect of the relationship. The values in parenthesis are the probability values of the estimates. The superscripts *, ** and *** signifies the level of significance at 1, 5 and 10%.

For policy relevant recommendations, we go further to establish the effect of land right on the age of women and its overall impact on their wealth. This additional analysis was motivated by the insignificant nature of the relationship between land rights and women’s wealth and the possibility that only older women are likely to benefit more from land right security. A new interactive variable, which is the multiplicative between land right and age of women, was developed and included in the baseline regression. This interactive term shows the indirect relationship that is likely to exist between the ages of women and land rights and its effect on their overall wealth. We considered the first measure of wealth in this estimation, since it shows the relative and actual income of women compared to the index measure of wealth.

From Table 6, the covariates did not behave out-richtly different from Table 5. However, the interactive variable (land right × age of woman) and the interactive term became significant and positive in most of the columns. The implication of this result is that older women who have land rights are more likely to enjoy better wealth. This is not farfetched; as previously mentioned, most of these women engage the lands for agrarian activities, and they do not sell it like the male counterparts would do. Therefore, if land rights are enhanced, they will tend to have more and

¹¹ The community market is a central market that operates essentially on market days – every four days.

better usage of the land, which will translate to their overall wealth.

To ascertain the consistency of the signs and significant levels of the interactive variables, we conducted a further estimation of the regression as it is in Table 6. We controlled for the following variables: the availability of community infrastructure, whether the women own the land in *Ota*, marital status of the women, whether the women are *Ota* indigenes, whether there are family rules governing their lands, having a certificate of ownership for their lands and mode of ownership (by purchase). From the Table, we could not verify the significance of the interactive variable in column 1. In this column, we controlled for community infrastructure (which shows the extent of development in the community) and the result revealed in Table 7 that the significance of the interactive variable is sensitive to the infrastructural development in the community of the women. This implies that the extent of development in the community affects the extent to which land rights can inform older women's wealth, since the variable is positive but not significant.

Table 7: Regression (Controlling for Other Intervening Factors)

	1	2	3	4	3	4	5
Household Head	-0.371*** (0.099)	-0.328 (0.114)	-0.345 (0.112)	-0.339*** (0.100)	-0.444** (0.038)	-0.316 (0.129)	-0.297 (0.165)
Education	0.569* (0.000)	0.499* (0.000)	0.512* (0.000)	0.528* (0.000)	0.462* (0.001)	0.482* (0.000)	0.488* (0.000)
Household Occupant	0.018 (0.826)	-0.058 (0.402)	-0.057 (0.434)	-0.078 (0.266)	-0.044 (0.511)	-0.056 (0.410)	-0.033 (0.624)
Age Composition	0.037 (0.661)	0.029 (0.725)	0.032 (0.793)	0.040 (0.632)	0.061 (0.471)	0.019 (0.188)	0.011 (0.896)
Years in Ota	-0.010 (0.244)	-0.012 (0.148)	-0.013 (0.126)	-0.016*** (0.074)	-0.014*** (0.073)	-0.012 (0.141)	-0.013*** (0.086)
Land Right × Age of Woman	0.009 (0.131)	0.010*** (0.094)	-0.013*** (0.100)	0.010*** (0.087)	0.010*** (0.082)	0.010*** (0.085)	0.010*** (0.080)
Community Infrastructure	Yes	-	-	-	-	-	-
Own Land in Ota	-	Yes	-	-	-	-	-
Marital Status	-	-	Yes	-	-	-	-
Indigene of the Community	-	-	-	Yes	-	-	-
Family Rules Governing Land	-	-	-	-	Yes	-	-
Certificate of Ownership	-	-	-	-	-	Yes	-
Land was Acquired by	-	-	-	-	-	-	Yes
Constant	8.396 (0.000)	9.208 (0.000)	9.069 (0.000)	9.609 (0.000)	9.708 (0.000)	11.371 (0.000)	9.261 (0.000)
R ²	0.289	0.256	0.262	0.271	0.276	0.100	0.280
F-Statistics	3.650	4.130	3.550	3.830	3.650	4.110	3.660
P-value	0.002	0.000	0.003	0.000	0.000	0.000	0.002

Note: Same as Table 4.3

The interactive variable remained positive and significant when controlling for the other variables, as earlier mentioned. The interactive variable is not sensitive to these variables and remained unchanged despite the inclusion or exclusion of any of these variables. The implication from this is that policies for land rights security for older women will still achieve its outcome despite the behaviour of other control variables.

5. Conclusion

Though efforts have been made to unravel the contributions of women to households, communities and the national economy, adequate research on gender access and ownership rights

to land and the implication on their economic empowerment have not received adequate attention. This was one of the main motivations for the present study with the main objective of underscoring the relationship between access to land and economic empowerment of women as well as examining how household features can influence women's empowerment through land rights using the case of communities in *Ota*, Ogun State, Nigeria.

Using a quantitative method of analysis based on data obtained from structured questionnaires some important findings from the study are highlighted herein: it was observed that lack of access to land and ownership of land rights tend to compromise women's access to credit facilities, among other limitations. The need for advancing the education of women is also highlighted based on the finding that the level of income will increase by about 50 percentage points as women gain more education. Most of the women that even make use of the land for agricultural activities are older women, and they productively use these lands for small scale crop production. This therefore implies that encouraging younger women to take active engagement in economic activities including agriculture by providing access to land will be useful in empowering women economically.

The policy implication from this study is that, though women's access to land does not show economic empowerment in general, older women can benefit from access to land. This is because older women's access to land will avail them the opportunity of farming and engaging it for other agrarian activities. These women engage in smallholder farming activities and will consequently generate revenue from these activities. This will have a positive effect on their family and their entire household, especially in the case of female headed households. The *Ota* community has its own specific peculiarity such as the "unchecked" land deals that go on by the male gender, which hinders women's participation in issues of land deals and resultant agricultural activities. Younger women do not engage much in agriculture, and it is little wonder the land right does not display a significant effect on women at linear values.

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Appendix

Figure 1A: Bar Chart Showing the Income of Women with and without Land Right

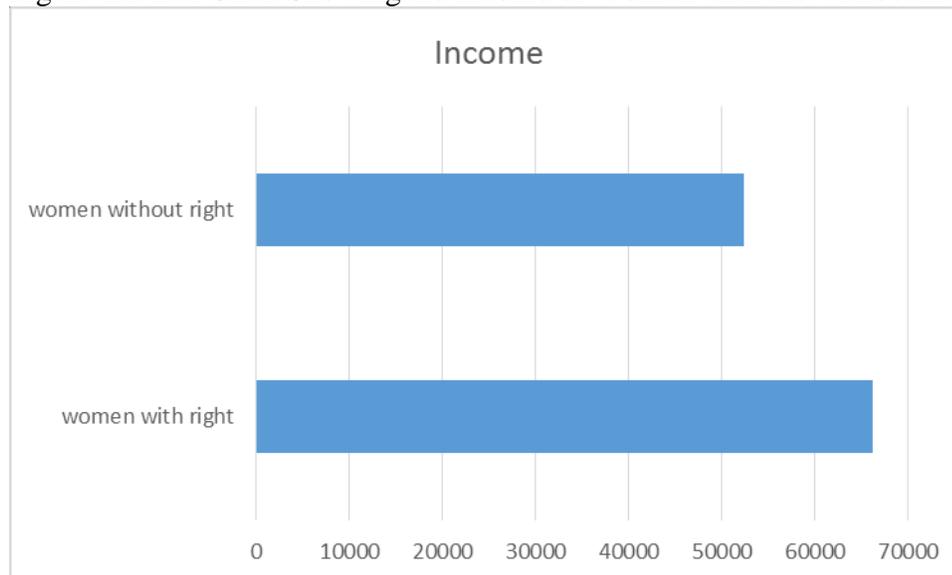


Table A2: Regression Analysis 2

Wealth: Wealth Index	1	2	3	4	5
Land Right		-0.551 (0.207)		-0.042 (0.873)	-0.300 (0.491)
Age	0.035 (0.004)	0.040 (0.012)			0.052 (0.006)
Household head	-0.683 (0.012)	-0.654 (0.041)			-0.455 (0.170)
Education	0.793 (0.000)	0.911 (0.000)			0.999 (0.000)
Household Occupant			0.024 (0.133)	0.015 (0.136)	0.022 (0.385)
Age Composition			-0.068 (0.154)	-0.099 (0.173)	-0.150 (0.248)
Years Residing in Ota			-0.009 (0.363)	-0.014 (0.293)	-0.011 (0.363)
Constant	-1.139 (0.146)	-1.170 (0.244)	2.891 (0.000)	3.443 (0.000)	-1.684 (0.163)
R ²	0.209	0.251	0.021	0.0519	0.352
F-Statistics	10.220	7.380	0.820	1.180	5.900
P-value	0	0	0.0083	0.1592	0.007

Note: the values in parenthesis are the probability values of the estimates. The superscripts *, ** and *** signifies the level of significance at 1, 5 and 10%.