Gendered Access to land and Food Security: Evidence from Nigeria

By

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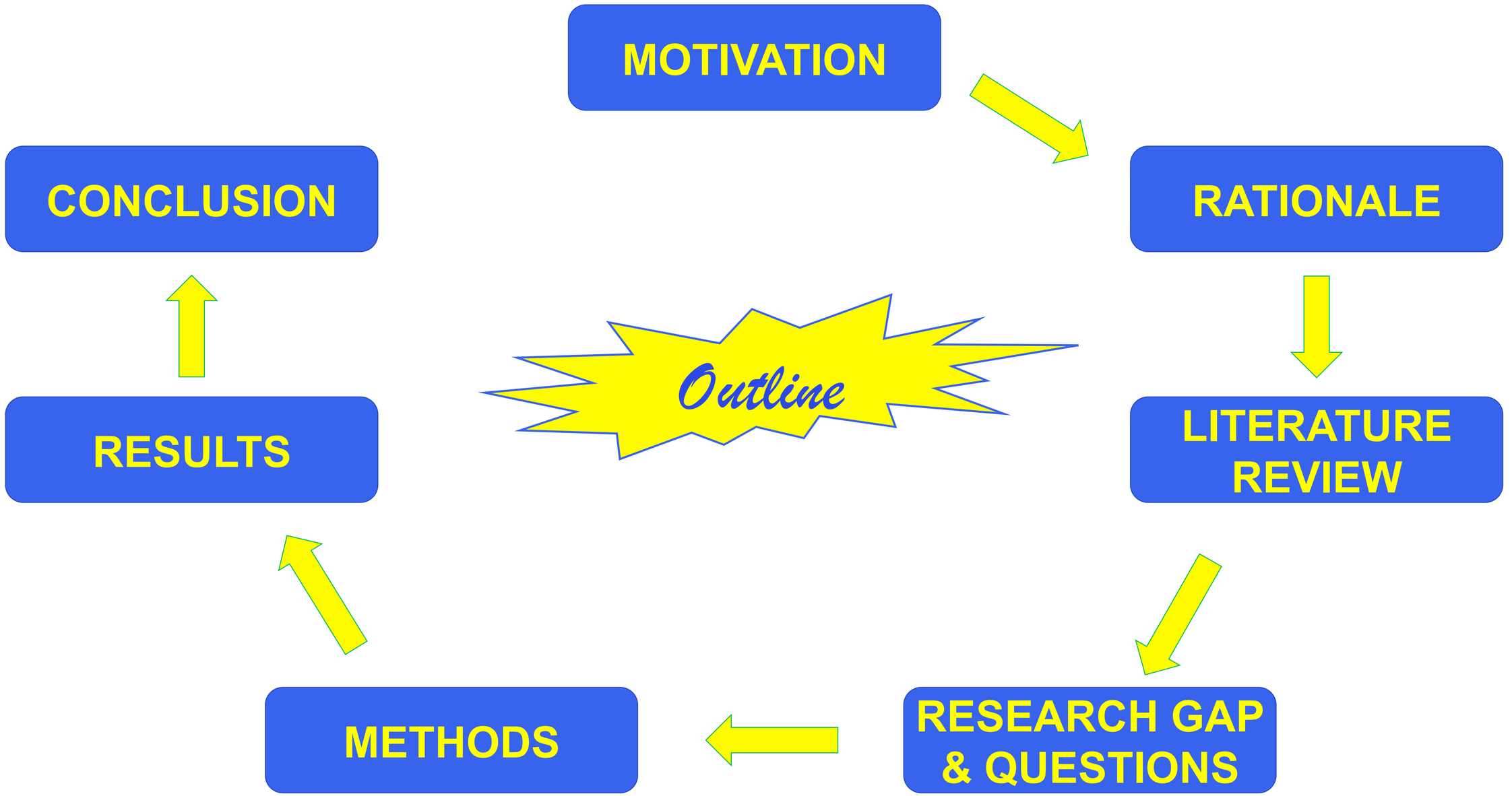
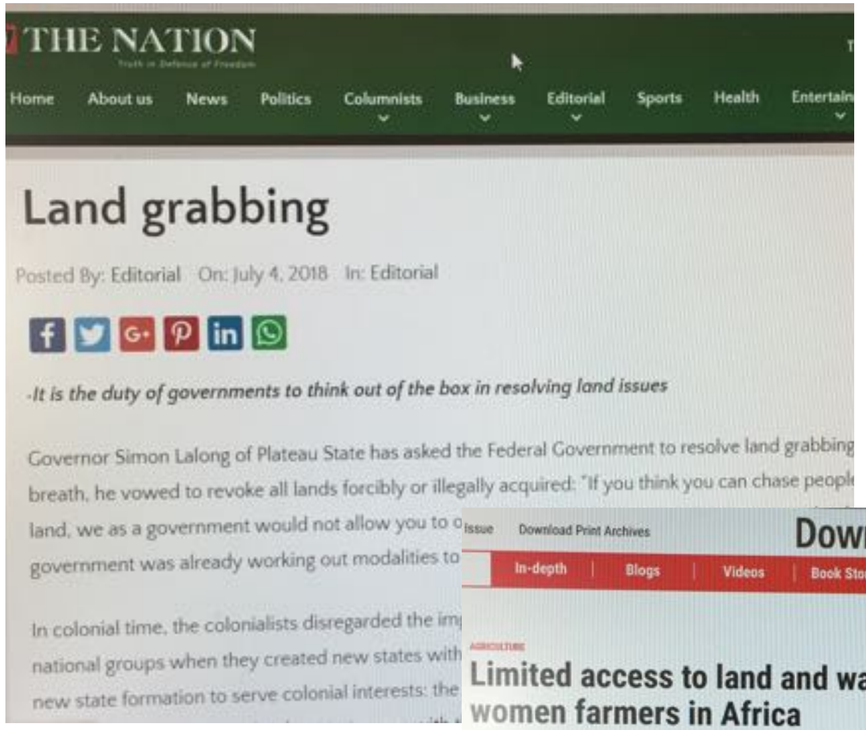

MOTIVATION
RATIONALE
LITERATURE REVIEW
RESEARCH GAP & QUESTIONS
METHODS
RESULTS
CONCLUSION
Outline

Motivation

- Population
- Agricultural activities
- Land - resource-use conflict - Food security threat
- Theoretical Model

Rationale for investigation

- Food Security – Gender – Conflict
- Gender – Access to Land – Food Security
- Gender & Agriculture in developing countries
- Food security - still a major global challenge in developing countries



Problem Statement

The study seeks to understand how gendered access to land influences households' food security by focusing on Nigeria.

Land Access and Food Security

Authors	Findings
Delvaux & Paloma (2018), Chamberlin & Ricker-Gilbert (2016), Mahmuda & Uddin (2011), Valente (2009)	Share tenants households, Access to common forest resources, single parent, lack of education reduce food security.
Aoudji et al. (2017), Rammohan & Pritchard (2014), Mahmuda & Uddin (2011)	Land ownership, large land holding, cash rent tenant, inherited land, education of hhh, high labour endowments, and farming increase food security.
Muraoka, Jin & Jayne (2018), Deininger, Savastano, & Xia (2017), Chamberlin & Ricker-Gilbert (2016), Holden & Otsuka (2014), Jin & Jayne (2013), Baland et al.(2003)	Land rental markets increases production efficiency (Kenya, Malawi, Zambia, Kenya, Uganda, Tanzania, Niger, Nigeria, Ethiopia)
Valente (2009)	Land grant recipients more food insecure – South Africa

Gendered Access to Land and Food Security

Authors	Findings
Wineman & Liverpool-Tasie (2017), Aoudji et al. (2017), Dokken (2015), Adekola et al. (2013), Iruonagbe (2011), Brück & Schindler (2009), Jayne et al. (2003)	Female headed households (FHHs) have less access to land (Tanzania, Benin, Nigeria, Mozambique, Zambia, Kenya, and Ethiopia)
Murugani et al. (2014), Khalid, Nyborg, & Khattak (2015), Chikaire et al. (2016)	Gender bias in land allocation (South Africa, Pakistan, Nigeria)
Tibesigwa & Visser (2016), Joshi & Joshi (2017), Akadiri, Nwaka, & Jenkins (2018), Kassie, Ndiritu, & Stage (2014)	MHHs more food secure than FHHs (South Africa, Nepal, Nigeria, Kenya)
Kerr (2005)	Women's unequal access to entitlements negative influence on FS - Malawi.
Tibesigwa & Visser (2016)	Agricultural production - FS of FHHs (South Africa) Off farm work – FS of MHHs
Mallick & Rafi (2010), Valente (2009)	No significant difference in FS of MHHs and FHHs FHHs participating in land grants were not less food secure than MHHs (Bangladesh, South Africa)

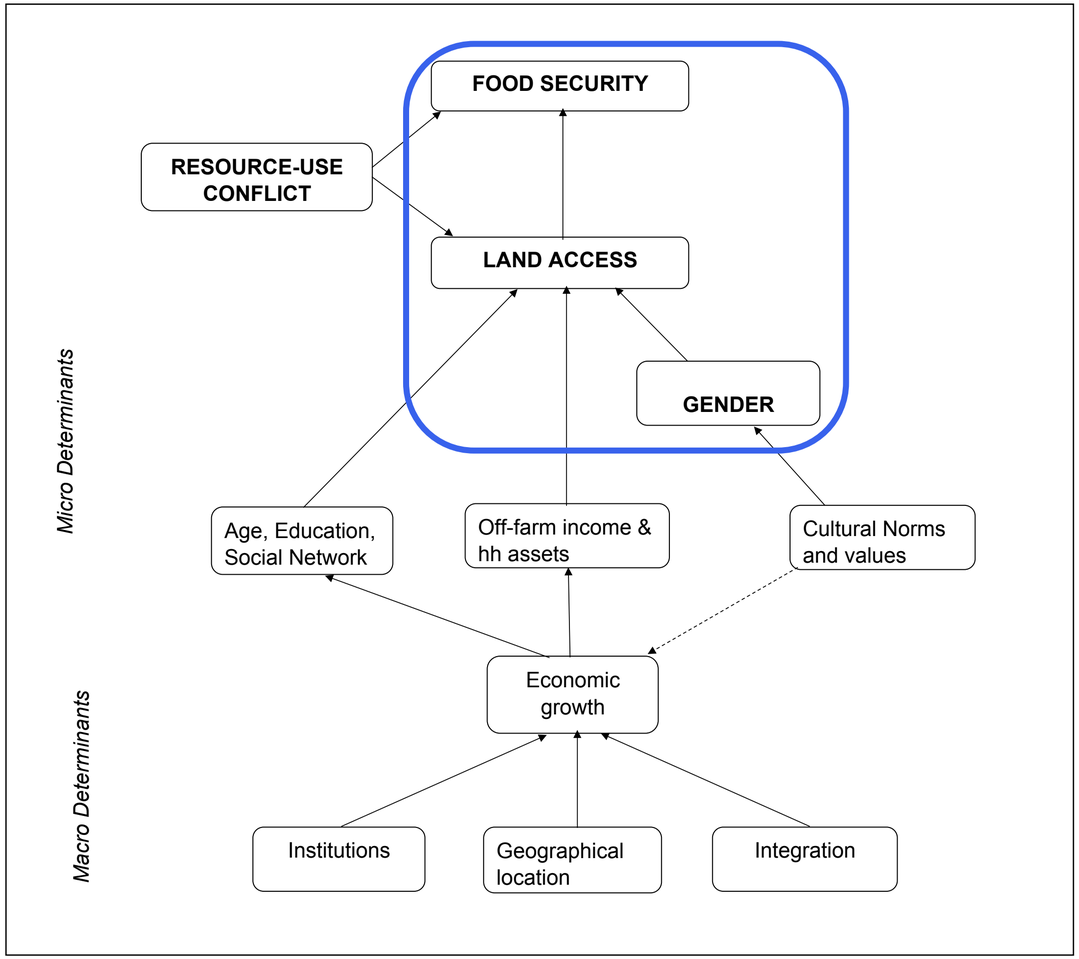
Research Gap

- No empirical study on gendered access to land and food security in Nigeria.

Research Question

- How does access to land and gender of household head influence food security of households in Nigeria?

Conceptual Framework



- Focus will be on micro-determinants of Food Security

- Gender - Land Access - Food Security

Study Area and Data

- Household and parcel-level secondary data from the 2015/2016 Nigerian General Household Survey.

- **Binary logistic regression model**

$$\square(\square\square\downarrow=1)=\alpha\downarrow 0+\alpha\downarrow 1\ \square\downarrow\downarrow\quad\square\alpha\downarrow 2\ \square\downarrow\downarrow\quad\square\square\downarrow\downarrow\quad\square$$

where $\square\downarrow\downarrow\quad\square$ Food insecurity status of households (1 = food insecure and 0 = food secure).

$\square\downarrow\downarrow\quad\square$= A vector of Control Variables

(Gender , Access to Land, Education etc.)

$\square\downarrow\downarrow\quad\square$ = Gender and Land access interaction term

$\square\downarrow\downarrow\quad\square$ = Error term.

Key Findings

Variables	Model 1	Model 2
Total land	-0.013 (0.006) **	-0.012 (0.006)*
Gender (1=female)	0.139 (0.067) **	0.049 (0.065)
Gender*land	-0.245 (0.136) *	-0.168 (0.127)
Age	-0.013 (0.007) *	-0.015 (0.008)**
Age squared	0.000 (0.000) *	0.000 (0.000)*
Dep. ratio	-0.040 (0.068)	0.010 (0.069)
Household size	-0.018 (0.023)	0.028 (0.025)
Location (1=rural)	0.017(0.040)	-0.006 (0.042)
Wall mat (1=mud)	-0.104 (0.033)***	0.014 (0.037)
Electricity (1=yes)	-0.002 (0.032)	0.010 (0.034)
Educational level	-0.043 (0.016)***	-0.052 (0.017)***
Tot. non-farm income	-0.000 (0.000)***	-0.000 (0.000)
Tot. farm income	-0.000 (0.000)***	-0.000 (0.000)**
Remittance (1=yes)	0.131 (0.083)	0.140 (0.083)*
North central zone		-0.092 (0.073)
North East zone		0.126 (0.067)*
North West zone		-0.239 (0.069)***
South East zone		0.284 (0.062)***
South South zone		0.189 (0.061)***
No of households	1096	1096
P > chi2	0.000	0.000
R-squared	0.0613	0.1599

Interpretation of Results

- Female-headed households are more likely to report being food insecure than male-headed households.
- Operated land size was found to increase the likelihood of households reporting food security.
- Although female-headed households are more likely to self-report food insecurity, the more land access a female-headed household has the more likely they are to report food security.

Interpretation of Results

- A wald chi-squared test (chi^2-3.21, p-0.073) and likelihood ratio test (chi^2-5.00, p-0.025).

Average marginal effect of Gender on Food Security at different levels of land access

Land Access (acres)		dy/dx	S. E.	Z	P>|z|	95% CI	
1SD<□□	0.0015	-0.249	0.138	-1.80	0.072	-0.521	0.022
□□	2.2939	-0.238	0.132	-1.80	0.072	-0.497	0.021
1SD>□□	5.7437	-0.216	0.121	-1.78	0.075	-0.453	0.021

- Results imply a slightly higher negative association between female headed-households and self-reporting food insecurity, at lower land access.
- This implies that for female-headed households with low access to land, every extra acre of land has a much higher positive effect on their food security compared with those with higher access to land.

Interpretation of Results

- The mean interaction marginal effect was -0.16.

Variable	Mean	Std. Dev.	Min	Max
Logit_IE	-0.16	0.1250	-0.2975	0.014

- For every acre of land accessed, female headed households were 16% less likely report food insecurity compared to male-headed households.

- Interaction effect varied (-0.2975 to 0.014), negative for some and positive for others.

- This implies that for some female headed households, extra access to land did not have an effect on their food security.

Contribution

- The study has quantified the effect of land access and gender on food security in Nigeria.
- Emphasize the need of gender equity and equality in accessing land for ensuring food security.
- Finally inform policy implementation around issues of land access and land tenure system not only in Nigeria but in other developing countries in support of the fifth Sustainable Development Goal.

THANKS FOR LISTENING

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TE WHARE WĀNAKA O AORAKI