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Rationalisation of Development Interventions Based on Local Realities; The Effects of Kinship Structures on Smallholder Production of Groundnuts in Malawi

Presented by

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Research Questions

- How do kinship structures shape smallholder production of groundnuts in Malawi?
- Is there a gender gap between men and women due to kinship structures?
- What are the major factors/predictors responsible for the gap?
- What are the implications for development of interventions?

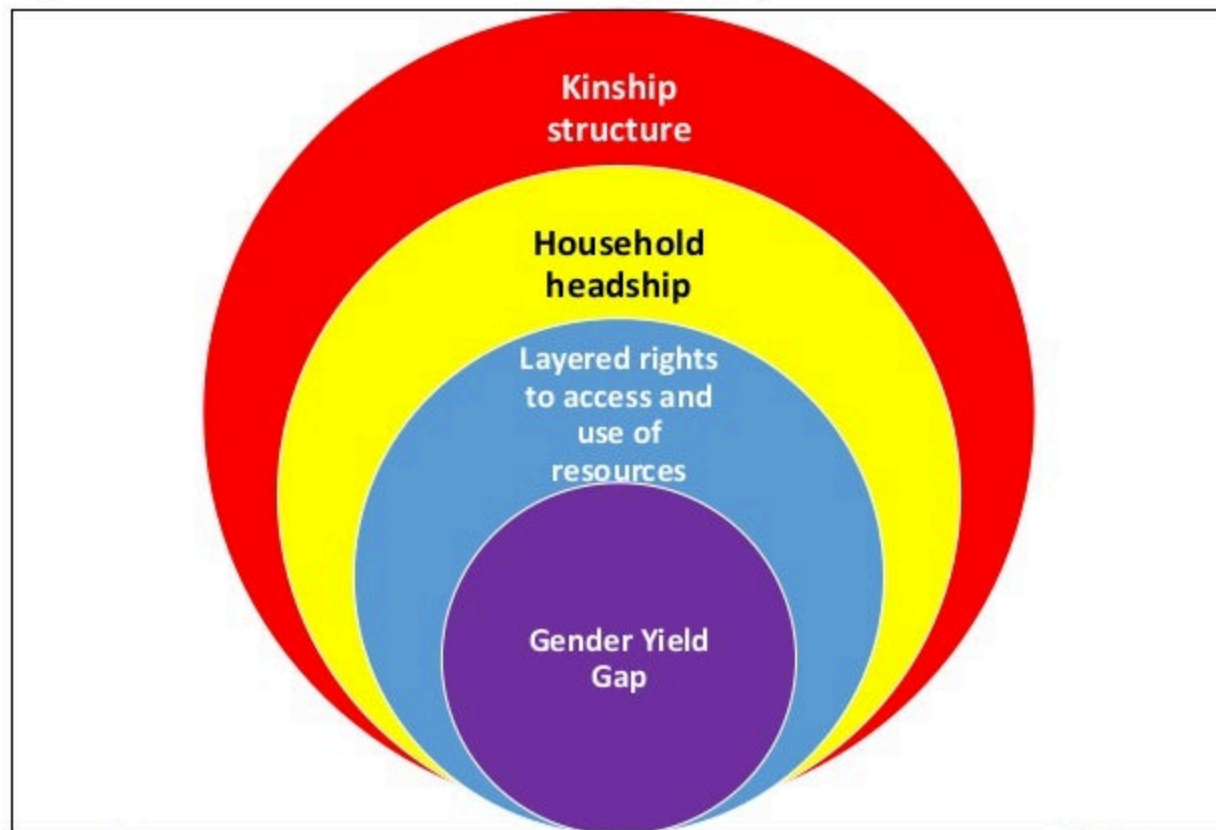


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Conceptualization and Operationalization



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Methodology

- Mixed methods (Q-squared) design involving QL & QN data collection and analysis of sex-disaggregated data focusing on three categories of household headship MHH, FHH and FMH

District	EPA	Villages	Kinship Structure	Household Typology
Mchinji	Kalulu, Mikundi	20	Matrilineal	FHH
Mzimba	Emfeni, Embegueni	20	Patrilineal	MHH
Mangochi	Mtiya, Namwera	15	Matrilineal and Patrilineal	FMH

- Districts purposively selected based on production levels and kinship structures.
- Purposive sampling was based on groundnuts production, Stratified sampling based on household headship, snowball sampling based on being NASFAM farmers and Non-NASFAM farmers (treatment group and control group respectively).



Respondents Profile

	Districts	Mangochi (FMH)	Mchinji (FHH)	Mzimba (MHH)
Respondents	No. of villages	15	20	20
	No. of respondents	72	100	113
	Lineage system	Matrilineal	Matrilineal	Patrilineal
	Gender	Male: 0% Female: 100%	Male: 51% Female: 49%	Male: 52% Female: 48%
	Average age	37.1 years	45.5 years	47.2 years
	Ethnic tribes	Yao	Chewa	Tumbuka
Literacy Levels	No Schooling	29.2	15.0	2.7
	Primary School	68.1	73.0	67.3
	Secondary School	2.8	12.0	30.1
Land Sizes	Average land sizes (ha)	0.342	0.404	0.270



Unpacking the gender gap based on kinship structure

- Our study is based on the theoretical framework by Becker (1965) and Agricultural Household Model (Singh et al. 1986) and Oaxaca-Blinder Decomposition (1973)

$$U = U(C, H, Z^h)$$

Oaxaca-Blinder decomposition

$$P_m = \alpha_m + X_m \beta_m + \epsilon_m \quad (1)$$

$$P_f = \alpha_f + X_f \beta_f + \epsilon_f \quad (2)$$

$$\bar{P}_M - \bar{P}_F = \underbrace{\hat{\beta}_M(\bar{X}_M - \bar{X}_F)}_{\text{Explained Variation}} + \underbrace{\{(\alpha_M - \alpha_F) + (\hat{\beta}_M - \hat{\beta}_F)\bar{X}_F\}}_{\text{Unexplained Variation}} \quad (3)$$



Decomposing the gender gap and kinship yield gap

	Gender			Kinship Structure		
	Coef.	Std. Error.			Coef.	Std. Error.
Males	5.0595***	0.0867		Matrilineal	5.0021***	0.0862
Females	4.8058***	0.0798		Patrilineal	4.7517***	0.0730
Difference	0.2538**	0.1178		difference	0.2504**	0.1130
Endowments	-0.8553***	0.2865		endowments	0.0829	0.0932
Coefficients	0.4948	0.5318		coefficients	0.4105***	0.1420
Interaction	0.6143	0.5864		interaction	-0.2430	0.1501



Discussion

- The mean for groundnut yield for males is approximately 5.0595 while that for females is 4.8058 resulting in a gap of 0.2538 (25%).
- In the gender yield gap, endowment effect is lowered by (0.8553), by both the coefficient effect (0.4948) and the interaction effect (0.6143).
- These results imply that if females had the same endowments as their male counterparts the gender gap would be reduced by (85.5) percent points.
- Thus the insignificant coefficient and interaction effect suggest that it is endowments effect that explains the gender yield gap



Discussion Cont'd

- Similarly, the mean yield for matrilineal households is 5.0021 and for patrilineal households is 4.7517 giving a yield gap of 0.381 (38%).
- The results show that coefficient effect is statistically significant and positive.
- This implies that if patrilineal households had the same returns to endowments as matrilineal households, their groundnut yields will increase by (41.05) percent point (coefficient effect 0.4105).
- Thus the kinship yield gap between the two groups is due to the returns to endowment effects, rather than the actual endowments as indicated by the statistically significant coefficient effect and insignificant endowment and interaction effects. This can be attributed to Mchinji being a matrilineal context and major groundnut producing region.
- The findings further suggest that equalizing production resources between the two groups will not eliminate the yield gap as it is based on structure. The endowment effect explains (33%), coefficient effect (164%) and interaction effect (-97%).



Variables Contributing to the Gap

By Gender	Endowment Effect		Coefficient Effect		Interaction Effect	
Variable	Coef.	Std. Error.	Coef.	Std. Error.	Coef.	Std. Error.
Plot manager (male)	-0.7809***	0.1812	0.0565	0.0057	0.6522***	0.2313
Plot manager (female)	-0.2955***	0.1099	-0.1322	0.3683	0.1279	0.3562
Plot manager (joint)	0.1092**	0.0466	-0.1118	0.0447	-0.1114**	0.0565
Main Occupation (farming=1)	0.0090	0.0128	0.8149*	0.4904	-0.0156	0.0222
Kinship (Matrilineal=1)	-0.0243	0.0305	0.3924***	0.1554	-0.1126**	0.0565
By Kinship Structure						
Plot size (per acre)	0.1400***	0.0474	-0.2473	0.1503	-0.0614	0.0412
Constraints in production	-0.0271	0.0227	-0.3015***	0.0963	0.0536	0.0435
Groundnut farming experience (years)	-0.0006	0.0051	0.2012*	0.1087	0.0202	0.0289
Plot manager (female manager)	0.0280	0.0209	-0.2220***	0.0605	-0.1339**	0.0465
Plot manager (jointly managed)	-0.0013	0.0105	0.0979**	0.0414	-0.0427*	0.0250



Discussion

- The findings indicate that plot manager characteristic significantly contributes to the overall endowment effect in the gender gap. The significant coefficient effect of kinship yield gap implies that compared to patrilineal, matrilineal lineage confers some structural advantage on females (secure land tenure).
- The results also show that variables that contributed to the widening of the kinship yield gap mostly reduced it through the significant interaction effect.
- Similarly, variables contributing to the gender gap show the general magnitude of the overall gender gap, these variables are; groundnut farming experience, female and joint plot management and constraints in production, significantly contribute to the coefficient gap (structural effect) while plot size is significant in the endowment effect.
- Major constraints according to the descriptive statistics are limited access to support services from extension (30% matrilineal and 15% patrilineal), access to inputs and expense of inputs specifically seed availability ranging from (36% matrilineal and 27% patrilineal).



Implications for Development Interventions

- Rationalising of development interventions based on local realities
- 1. Understanding of local realities, structures and opportunities that local contexts offer or constraint is a necessary prerequisite for integrating ideologies, values, assumptions and information to rationalise development interventions.
- 2. The gender system both contexts uncovers the gender-specific and gender-intensified constraints (Kabeer 2010) that the study posits are systemic components that are more resistant to change.
- 3. Feminisation of agriculture in the southern region is on the rise with the high out-migration of men to South Africa for wage-work and also as an escape from the roles and status ascribed by matrilineal customs.

