

Has the provision of legume seeds subsidies affected dietary diversity? Household survey evidence from Malawi Farm Input Subsidy Program (FISP)

Presented by

Mirriam Matita (doctoral student, University of Malawi)

email: mirriammatita@gmail.com

Twitter: @Miry58n

Study Supervisors: Prof. E. W. Chirwa, Dr J. Mazalale, Ass. Prof., H. Walls

Introduction

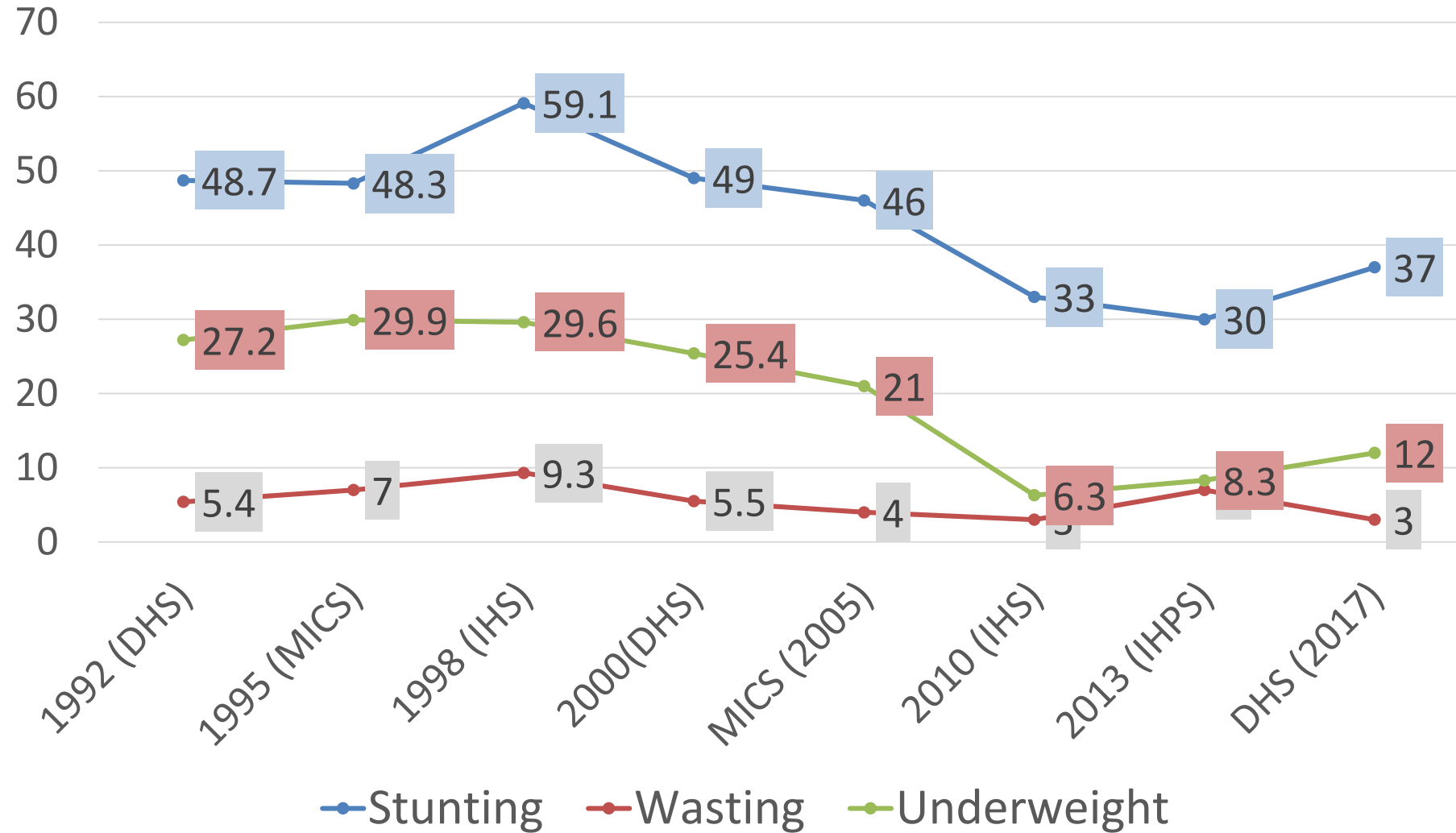
- Malawi FISP started decade ago (2005/6)
 - 900,000 beneficiaries; Two 50 kgs bags fertilizer
 - Improved maize & later legume seeds (2009)
- Stated FISP Objectives – increase productivity, incomes
- Policy has reinforced
 - emphasis on national maize self-sufficiency (45% of cereals, grown in 75% of plots)
 - Legumes production has also risen (though only 5% of national crop production)

Introduction

However, programme costs remain huge

- 10% national budget; 40-70% Agriculture Budget
- Nutritional consequences
 - Diets dominated by maize
 - Inadequate diet diversity
 - Associated with lack of essential nutrients
 - High undernutrition

Malnutrition remains a challenge



Study Objectives

- To investigate effects of inclusion of legumes in FISP on Dietary Diversity (DD) in Malawi.
- Specifically,
 - To assess whether receipt of any subsidy coupon affects DD
 - To determine influence of redemption of specific FISP package (maize or legumes) on DD

Previous research shows input subsidies have potential to support DD

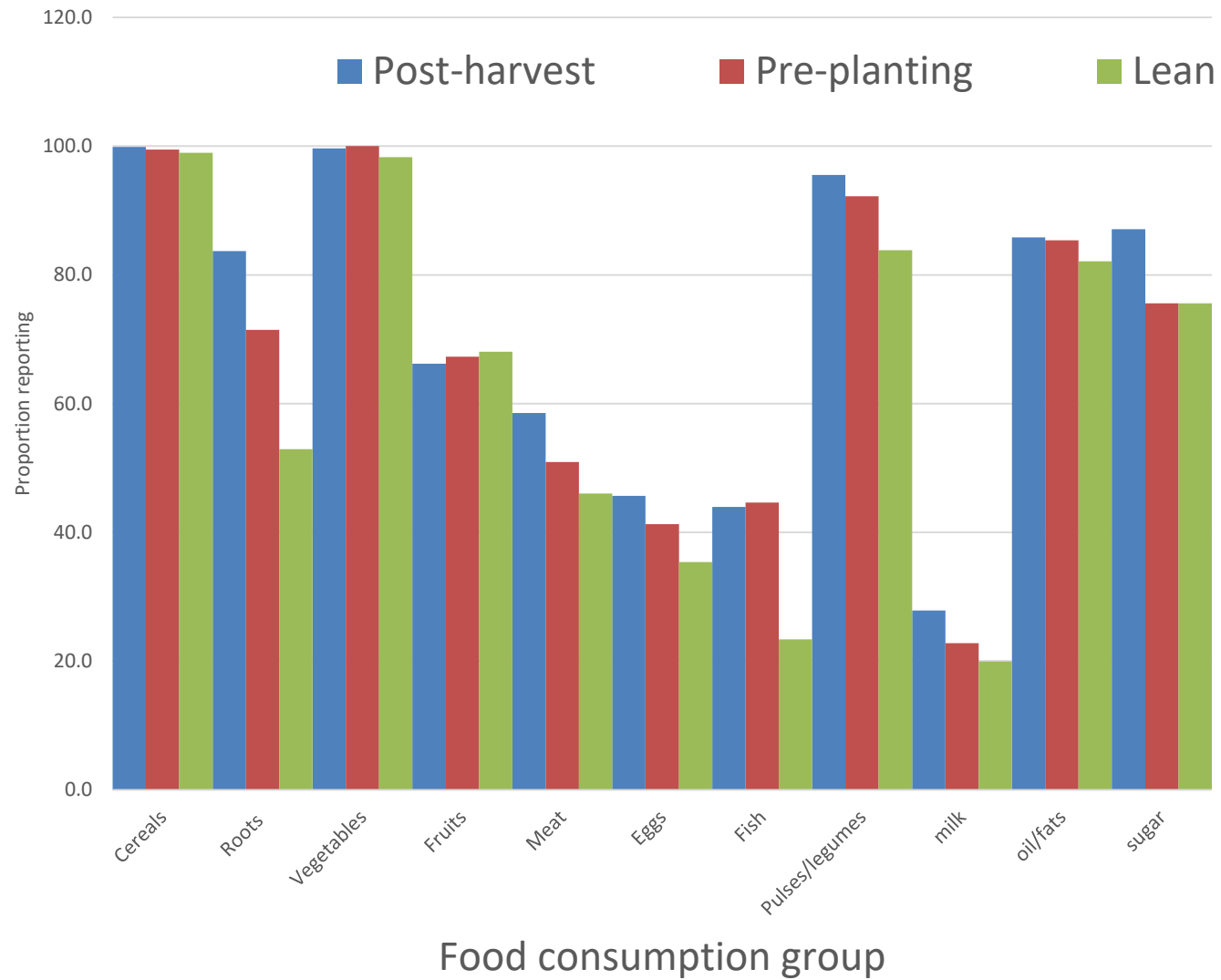
Methods

- Estimated Panel Poisson regression

$$DD_{it} = \alpha_0 + \delta_t + \beta_i(FISP_i) + X_{it} + \varepsilon_{it}$$

- i individual HH, t season of when consumption data was collected
- δ_t accounts for seasonality
- X_{it} - control variables [assets, social, economic variables, production diversity)
- Used Integrated Household Panel Surveys data 2013 & 2016

Seasonal variation in food consumption



Redemption of legume coupon influences dietary diversity

- Receipt of any subsidy coupon was not associated DD
- Redemption of legume coupon +vely & sig associated with DD.

Independent variable	Model 1		Model 2	
	Coef.	Z	Coef.	Z
Any subsidy coupon	-	-	0.005	0.72
Legume coupon	0.042	2.31**	-	-
Maize coupon	-0.014	-0.85	-	-

Household Wealth drives dietary diversity

Indpt variable	Model 1		Model 2	
	Coef.	Z	Coef.	Z
Asset index	0.179	7.57*	0.179	7.36*
TLU	0.025	3.50*	0.024	3.93*
Poor	-0.076	-6.28*	-0.077	-5.95*
Yrs educ HH	0.010	8.85*	0.010	7.65*
Wage_e	0.101	3.99*	0.100	4.67*
Business_e	0.079	3.06*	0.081	3.46*

Market participation drives dietary diversity

Independent variable	Model 1		Model 2	
	Coef.	Z	Coef.	Z
Sold maize	0.031	3.16*	0.031	2.62**
Sold legume	0.003	0.27	0.003	0.23
Credit (0/1)	0.024	2.71*	0.024	2.91*
Prod. diversity	0.010	3.04*	0.011	2.20**

Conclusion

- Inclusion of legumes in FISP influences dietary diversity
 - Even when accounting for market access, production patterns, seasonality
- Complicated picture – maize seems to affect DD through market; legumes through consumption pathway
- Might need to disaggregated the data further
 - rural/urban; 2013/2016; seasons
- Suggest increasing legume component under FISP has benefits so is addressing varied availability of legume seeds in FISP markets.

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Thank you

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