

# **Does Malawi's Farm Input Subsidy Programme (FISP) improve dietary diversity?**

**Helen Walls, Deborah Johnston, Ephraim Chirwa, Mirriam Matita, Jacob Mazalale, Matthew Quaife, Tayamika Kamwanja, Richard Smith**

ANH Academy Week, Hyderabad  
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- We are very grateful to the study participants for their contributions to the study.
- This research has been funded by the Drivers of Food Choice (DFC) Competitive Grants Program, which is funded by the UK Government's Department for International Development and the Bill & Melinda Gates Foundation, and managed by the University of South Carolina, Arnold School of Public Health, USA; however the views expressed do not necessarily reflect the UK Government's official policies.

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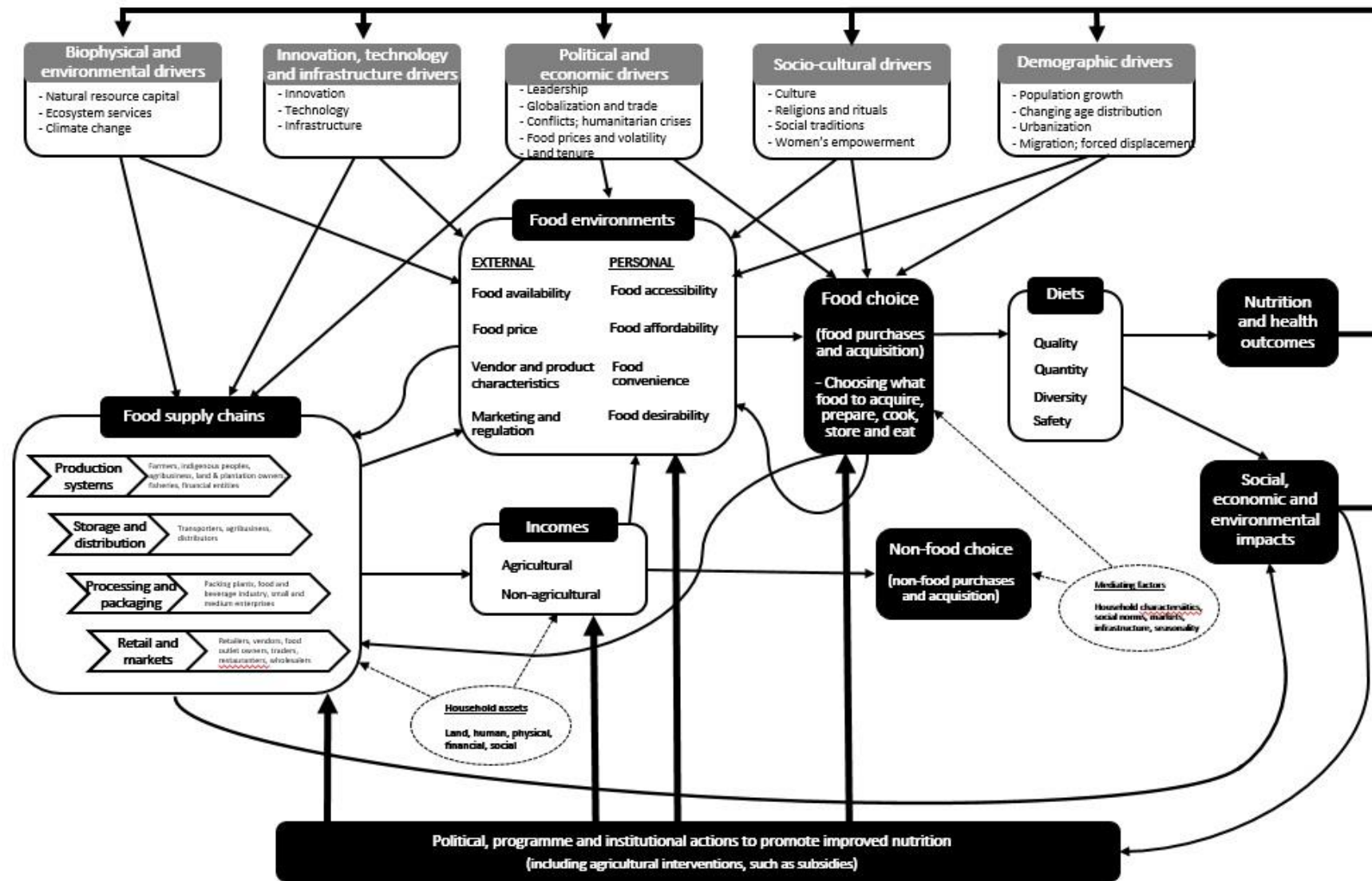


# Introduction

- AISs are often considered an important means of improving agricultural productivity and food security in LMICs.
- However, AIS nutritional impact is unclear
- ***Using mixed methods, we examined the impact of Malawi's AIS programme, the Farm Input Subsidy Program (FISP), targeting mostly maize, on overall food choice.***
- The FISP aims to support agricultural production, and is administered through vouchers that enable eligible households to purchase fertiliser and hybrid seed at reduced prices.
- Malnutrition a significant public health burden in Malawi.
  - In 2015/6, 37% of Malawian children aged under 5 years were stunted, and 12% were underweight.



# Our conceptual framework





# Methods

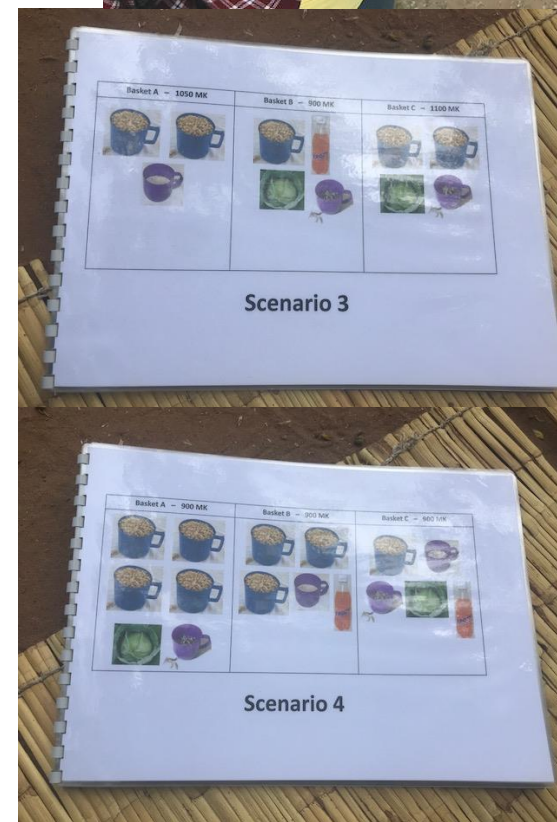
- Mixed-methods research
- Lilongwe District, Phalombe District – central & southern Malawi.
- Data collection involved:
  - Individual & household surveys – & market surveys of food price
  - Discrete choice experiment
  - Focus group discussions
  - Semi-structured interviews
- Time points for data collection (for survey data; and FGDs)
  - May 2017 – Post-harvest season; maize prices expected to be low
  - Feb/March 2018 – Lean season; maize prices expected to be high



# Discrete choice experiment

- Involved simulating the context in which participants would normally make food choices.
- We selected 5 food types: maize; rice; cabbage; dried fish; soft drink.
- Participants asked to indicate their preferred food basket; from 3 hypothetical baskets in each task.
- One set of 5 tasks had maize at higher price (400 MK/kg), the other at a lower price (100 MK/kg).
- Each basket had value of 900-1100 MK.
- “If you were shopping at the market for your household for the next 2-3 days, and had ~1000 MK to spend, which of these baskets would you choose?”*

Our standard cup sizes were used to understand quantity, and explain the DCE





# Ethics

- Interview guides developed, translated, amended with support of our study field workers, and piloted prior to use in study.
- Participants provided informed consent.
- Consent usually provided in written form. In some cases, participants provided consent with an ink thumb print.
- Ethical approval from Malawi's National Committee on Research Ethics on Social Sciences and Humanities and LSHTM.



# **Results – Comparing FISP beneficiaries and non-beneficiaries**

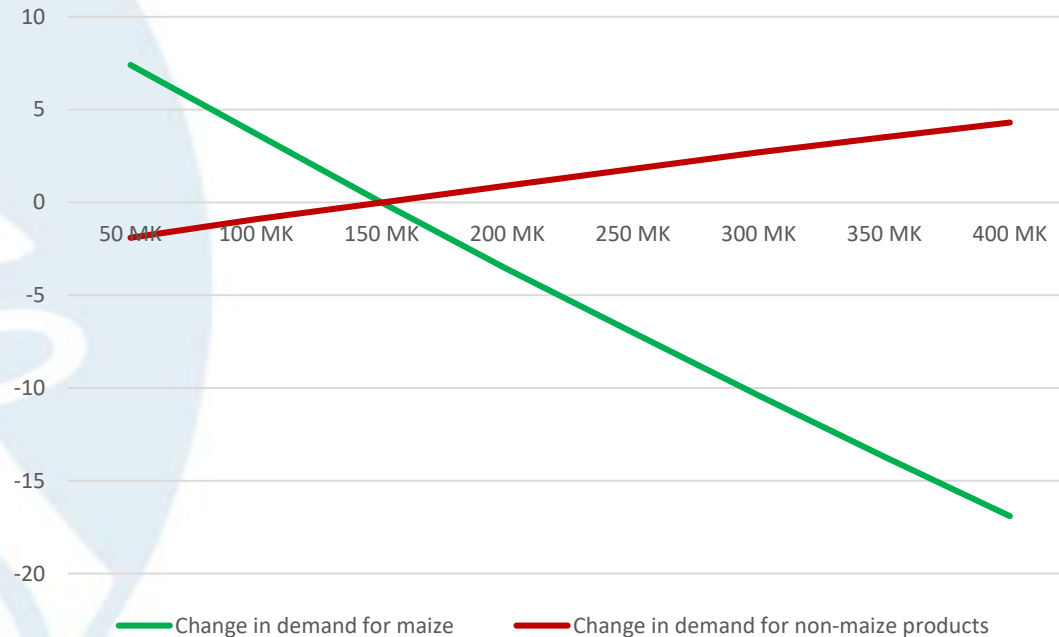
- Univariate model – general pattern of FISP beneficiaries (ever, followed by in 2016/17) having higher dietary diversity (individual and household), but this not statistically significant.
- Multivariate model – unclear pattern, and not statistically significant. (controlling for age, gender and education of household head, size of household and asset index)
- Conclusion? No evidence that participation in the FISP affects dietary diversity, either as an ‘ever’ or a ‘recent’ FISP beneficiary





# Results – the DCE

Change in demand for maize and non-maize products with increasing maize price



- Conclusion? If FISP leads to lower maize price, people would still buy more maize and less of other products – due to food insecurity?

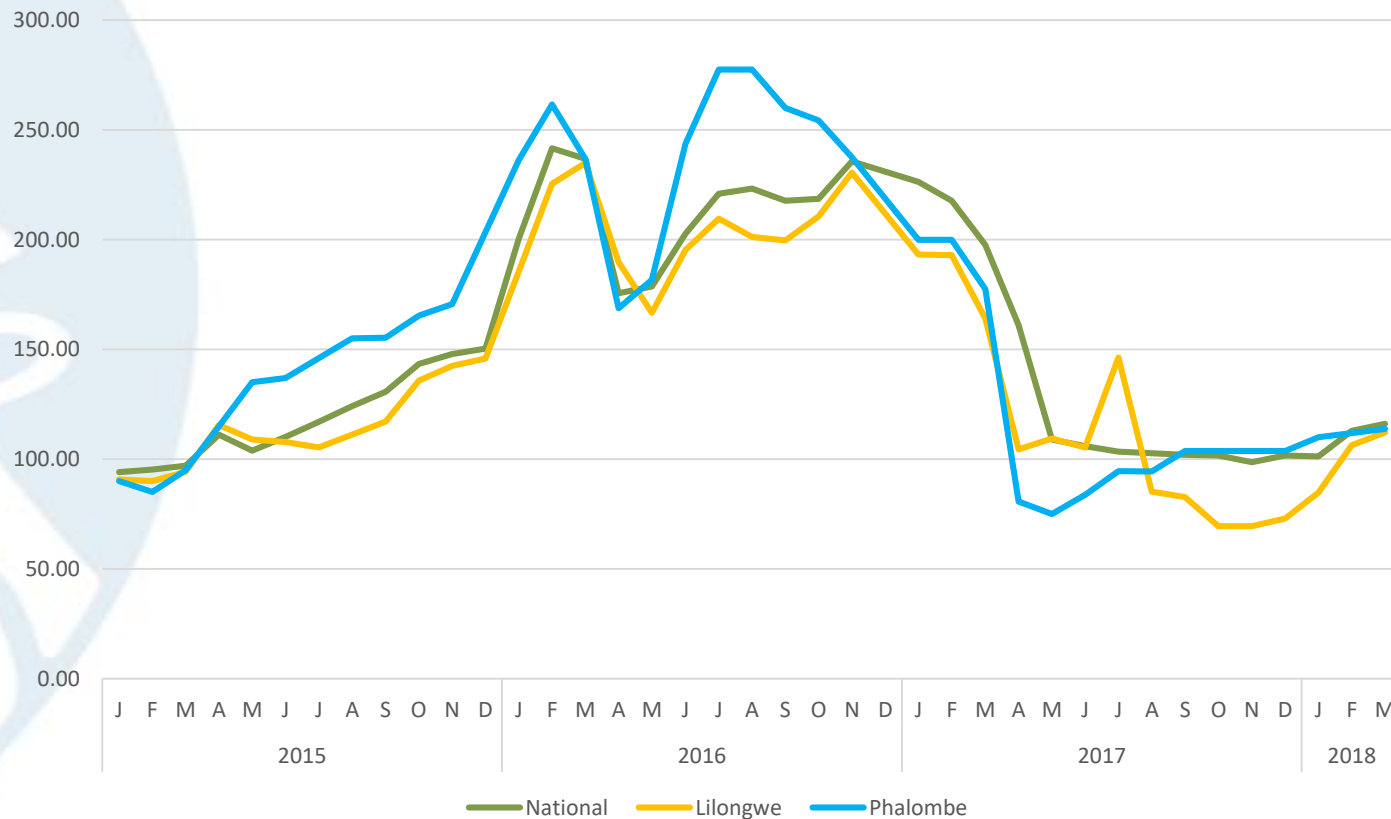
- As maize price increases:
  - demand for maize falls
  - demand for non-maize products increases, but less so than fall in demand for maize





# Seasonal food price changes

Average maize prices in Malawi nationally, in Lilongwe and Phalombe Districts, 2015-18



Source: Ministry of Agriculture, Irrigation and Water Development



# Results – Seasonal food price changes

Average change in maize price between post-harvest and lean seasons (May, and the following February/March)

	Average changes in the price of maize,		
	Nationally	Lilongwe District	Phalombe District
2015/16	130.3% increase	111.2% increase	8.5% increase
2016/17	16.3% increase	7.1% increase	3.9% increase
2017/18	5.1% increase	0.1% increase	50.0% increase

Source: Ministry of Agriculture, Irrigation and Water Development

## Dietary diversity scores by location

Dietary Diversity Score (DDS)	May 2017 (Post-harvest season)		Feb/March 2018 (Lean season)		Change between the two seasons			
	Phalombe	Lilongwe	Phalombe	Lilongwe	Phalombe		Lilongwe	
					% change	Absolute change	% change	Absolute change
Individual DDS (9 food groups)	3.22	3.125	2.68	2.27*	16.8%	0.54	27.4%	0.855
Household DDS (12 food groups)	4.915	3.82*	4.09	3.405*	16.8%	0.825	10.9%	0.415

Note: Superscripts \*, \*\*, \*\*\* represents statistically significant differences between Phalombe and Lilongwe at 1%, 5% and 10% levels, respectively.

# Results – stakeholder perspectives

- The lack of benefit of the FISP found in the analyses above was largely reflected in the qualitative analyses.
- FGD participants negative about FISP and nutritional impact.
  - *“It is supposed to help poor people to access cheaper fertiliser and seeds but they do not access the help, rather it is the wealthier people who do.”*
  - *“It’s hard to sell even one bag of maize to buy other foods like chips or meat.”*
- Village chiefs were most positive about FISP nutritional impact.
  - *“FISP contributes to better nutrition as people are given beans, soya and groundnuts.”*
  - *“FISP affects people’s food choices as it increases their incomes, and they can then buy what they wish.”*
- DC/MoH/MoA participant views mixed, with concerns expressed.
  - *“FISP does not result in improved productivity because it does not target the productive farmers.”*





# Conclusions

- Hypothesised impact pathways from AIS programmes to food choice and DD suggest the FISP could be contributing to improved DD.
- However, our analyses suggest no significant FISP impact on food choices and DD.
- This is likely due to:
  - the way that the FISP policy is designed/implemented. The interviews and FGDs raise several issues relating to policy implementation that may help explain this lack of impact.
  - Chronic food insecurity and nutritional deficits of dietary energy
- The study has several limitations (sample size, one year of study data etc), however we have triangulated data from several sources to provide a nuanced understanding of FISP impact on dietary diversity.



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