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.
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

Source: Adapted from: HLPE 2017; Turner et al. (2018).
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?”
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

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

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Nationally</th>
<th>Lilongwe District</th>
<th>Phalombe District</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015/16</td>
<td>130.3% increase</td>
<td>111.2% increase</td>
<td>8.5% increase</td>
</tr>
<tr>
<td>2016/17</td>
<td>16.3% increase</td>
<td>7.1% increase</td>
<td>3.9% increase</td>
</tr>
<tr>
<td>2017/18</td>
<td>5.1% increase</td>
<td>0.1% increase</td>
<td>50.0% increase</td>
</tr>
</tbody>
</table>

Source: Ministry of Agriculture, Irrigation and Water Development

Dietary diversity scores by location

<table>
<thead>
<tr>
<th>Dietary Diversity Score (DDS)</th>
<th>May 2017 (Post-harvest season)</th>
<th>Feb/March 2018 (Lean season)</th>
<th>Change between the two seasons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Phalombe</td>
<td>Lilongwe</td>
<td>Phalombe</td>
</tr>
<tr>
<td>Individual DDS (9 food groups)</td>
<td>3.22</td>
<td>3.125</td>
<td>2.68</td>
</tr>
<tr>
<td>Household DDS (12 food groups)</td>
<td>4.915</td>
<td>3.82*</td>
<td>4.09</td>
</tr>
</tbody>
</table>

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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