Behavioral insights from ‘Making Markets’

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How do we ‘make markets’?

- Missing markets are central to theories of development which often explain misallocation and inefficiencies in the agricultural sector.

- 70 percent of farmers at baseline had not interacted with an ag-dealer *in their village* in the previous agricultural season.

- In a state-contingent model of input demand, market access depends on time (*post-harvest or planting*) and place (*at the village level*).

Behavioral and other insights to ‘make markets’

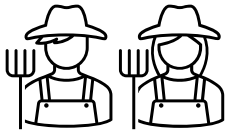
- Duflo et al. (2012) argue commitment improves input adoption because farmers delay making productive investments.

- Seasonal liquidity, highest in the post-harvest period, can also affect input demand (Fink et al. 2020).

- What are the effects of market timing, liquidity and commitment in making input markets?

The Village Input Fair Model

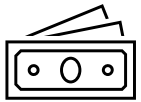
Demand Side Actors



Farmers

Supply Side Actors

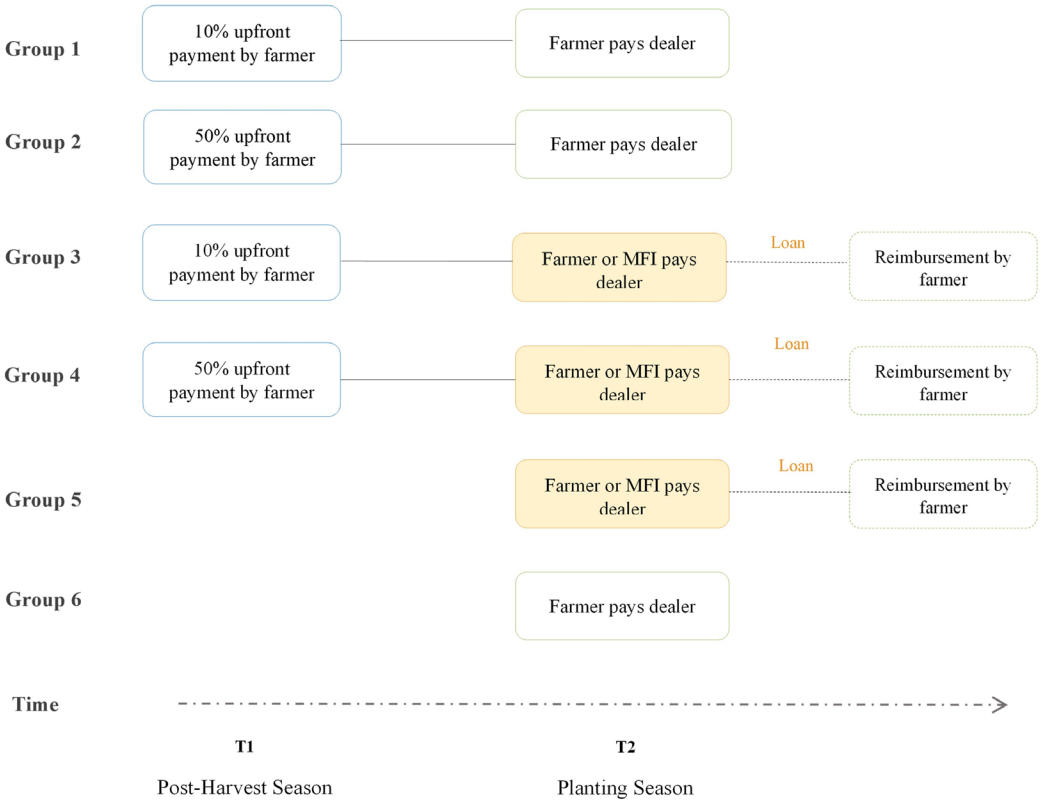
Ag-Dealers



MFI

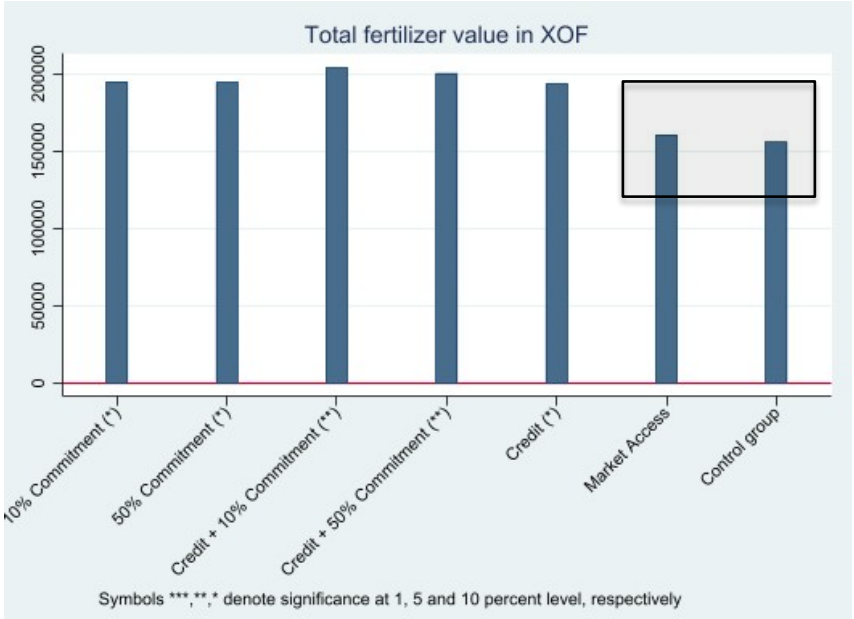
A one-day market organized in villages where ag-input dealers take advance orders for agricultural inputs

Experimental Design



Result 1: Providing market access alone does not increase fertilizer demand

All credit and commitment contract treatments have statistically significant effects on farmer fertilizer demand.



Result 2:
Liquidity and commitment ‘make markets’

	Total fertilizer value
	2
Post-Harvest Season	
10% Commitment	39,098*
	(22,187)
50% Commitment	38,778*
	(21,167)
10% Commitment + Credit	48,266**
	(22,712)
50% Commitment + Credit	44,610**
	(19,969)
Planting Season	
Credit	37,923*
	(19,322)
Market Access	4,796
	(21,177)
Cons	155,902
	(179,370)
Number of observations	4,774
i	$Ho: \beta^i = \beta^j$
1	
2	
3	6
4	6
5	

- Liquidity and commitment are substitutes.
  - (10% or 50% commitment vs Credit)
- No statistically significant effect of credit when included with commitment contract even though slightly higher demand.
- From an investment design perspective, commitment contracts cost less, but integrating credit might facilitate trust and increase participation by marginalized groups.

Result 3:
Behavioral interventions affect participation

	Village is aware of the input fair	Percentage of villages with at least one purchase	Proportion of participants who have ordered inputs (unconditionnal)
Post-Harvest Season			
10% Commitment	100.0%	80%	18.2%
50% Commitment	95.0%	70%	23.0%
10% Commitment + Credit	90.0%	70%	23.9%
50% Commitment + Credit	90.0%	45%	21.9%
Planting season			
Credit	100.0%	100%	53.2%
Market Access	95.0%	100%	52.9%
Total	95.0%	78%	33.2%

- Lower participation rates in treatments with commitment relative to planting season treatments.
- Orders are higher in post-harvest treatments.
- Village leaders reported refusing 50% + credit treatments because they didn't think it was fair to farmers.
- Farmers report very low trust in 50% commitment contracts.

Final more general thoughts….

- Behavioral insights are important for program design, but test alternative theories of change too.
  - Not all farmers are the same!
  - Innovate by encouraging measurement experiments during piloting / early stages of projects.
  - Cost implications of liquidity vs behavioral interventions.

- As you move to scale program models, behavioral implications are important to consider:
  - Auction design
  - Public versus private sector scaling strategies