

# Agricultural Research in Action: Insights about Loyalty and Governance in Farmer Based Organizations

## **Speakers**

**Lorenzo Casaburi**, Stanford University

**Greg Grothe**, Land O'Lakes International Development

**Rocco Macchiavello**, Warwick University

## **Facilitator**

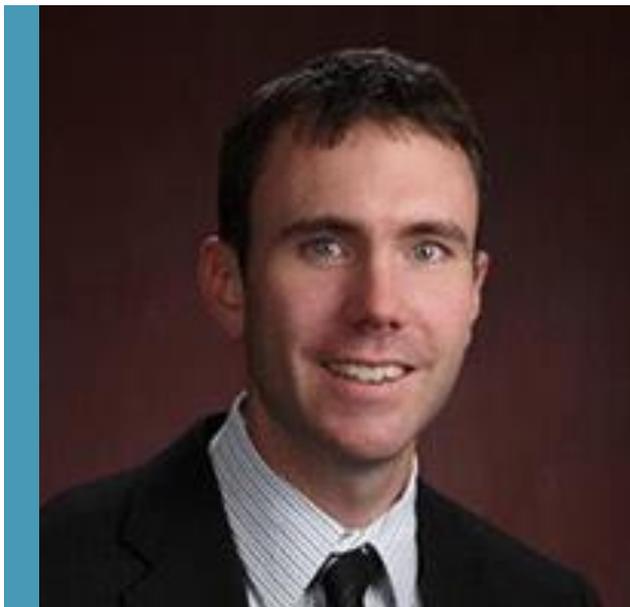
**Thomas Carter**, Senior Advisor, Cooperative Development at USAID

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## Bio

**Lorenzo Casaburi** is a Postdoctoral Fellow at the Stanford Institute for Economic Policy Research. His research in development economics — which primarily focuses on agricultural markets in Sub-Saharan Africa and State capacity — has been funded by several institutions, including USAID, DFID, IGC, 3ie, and JPAL. Lorenzo holds a Ph.D. in Economics from Harvard.



## Bio

**Greg Grothe** manages USAID-funded programs that focus on value chain development of dairy and multi-purpose cooperatives in four countries in East Africa. He also provides technical oversight and support to a portfolio of enterprise acceleration and market development programs in Africa and Asia. Over his 15-year career, he has served in international business leadership roles.



## Bio

**Rocco Macchiavello** is a professor of economics at the University of Warwick. At the intersection of development economics, international trade., and organizational economics, his research primarily focuses on understanding the institutional constraints to and determinants of industrial development. Rocco holds a PhD in Economics from the London School of Economics and Political Science (LSE).

# Hypotheses on What Drives Member Loyalty in Agricultural Cooperatives?

- Good services offered by the cooperative (value for the money)
- Access to markets
- Emotional benefits (association with the cooperative)
- Trust in the cooperative leadership

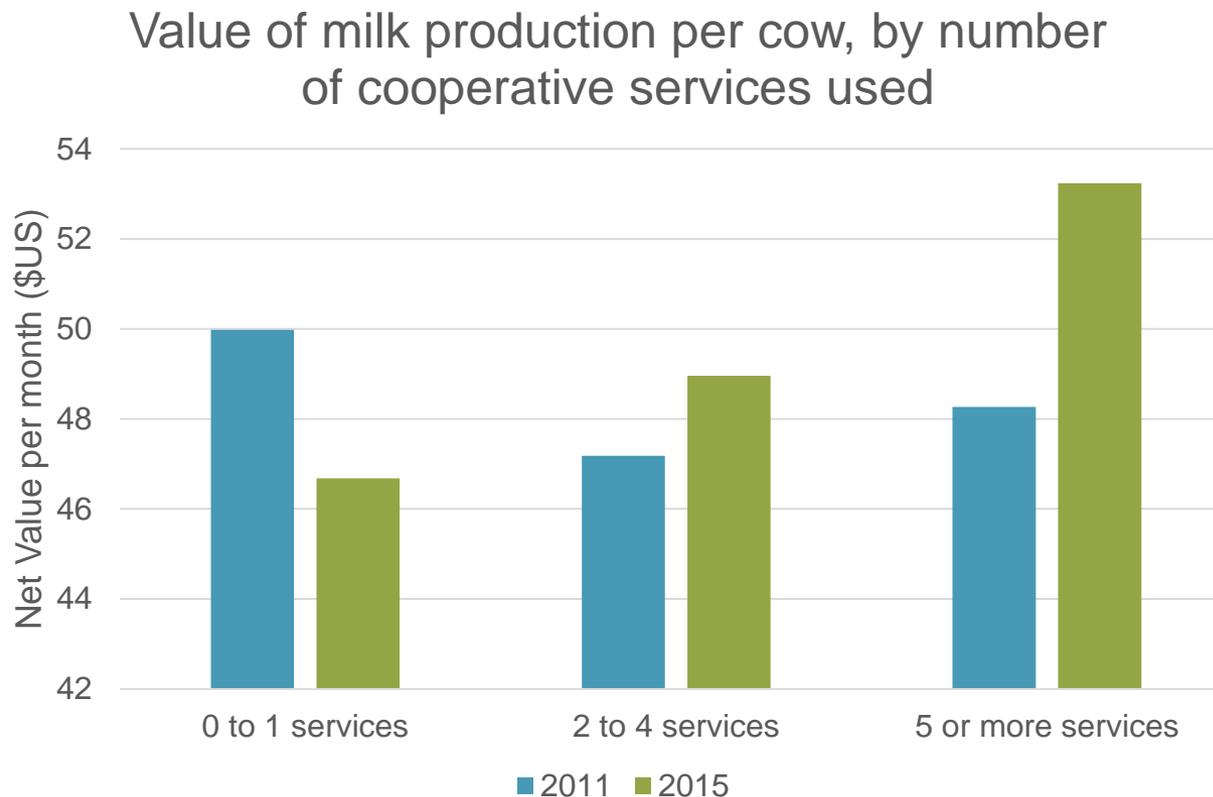
# What do farmers value in membership (survey of Kenyan dairy coop members)?

- Payment delivery (timeliness and convenience) were the top ranked benefits
- Services such as trainings, exchange visits and inputs on credit were ranked as important
- Of eight different benefits to membership, price was listed as the least important

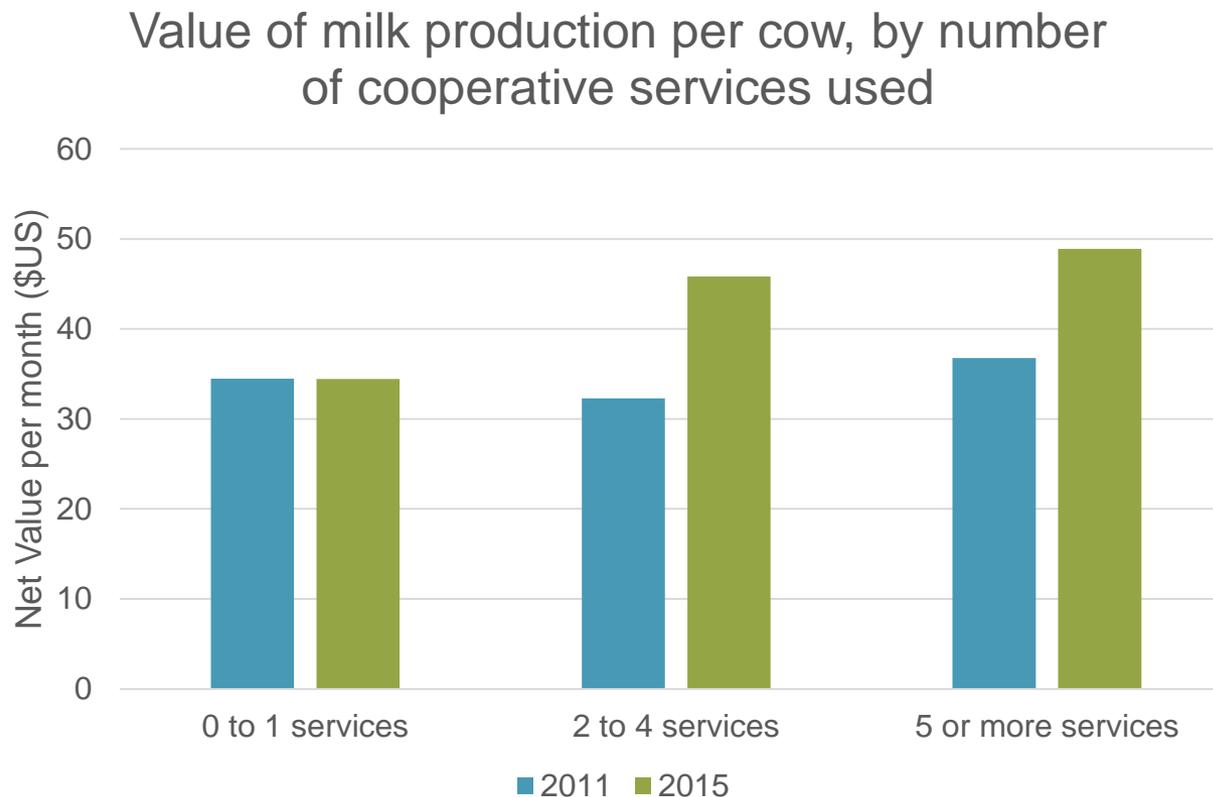
# Why are some farmers non-members?

Reason for non-membership	Percent of non-members interviewed cluster A	Percent of non-members interviewed cluster B
Low Prices	54.3%	75.3%
Rumors of delayed payment	33.6%	26.9%
Long distance to collection center	25.2%	17.9%
Inconvenient collection times	22.9%	9.8%
Poor services	21.4%	27.0%
Don't produce enough milk	20.5%	18.5%
Strict quality requirements	15.1%	9.8%
Membership fees	12.6%	21.3%
Collection delays	10.3%	6.7%
No evening collection	10.3%	4.9%
Trust issues	9.9%	14.5%

# Relationship between services used by farmers and value of milk production (coop group A)



# Relationship between services used by farmers and value of milk production (coop group B)



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# Market Access for Dairy Farmers

Percent of Milk Sales by Buyer



# Qualitative focus groups confirm the value of accessing market

*“Me, I can never sell my milk to another buyer other than the Dairy. I do not have the strength to chase the brokers to pay. I also would like to see our dairy remain with us so that we can have a stable milk market.” – Central Kenya Dairy Farmer*

- Knowledge, training and exchange visits help improve cattle management and dairy farming business practices
- Improve milk production and productivity
- Reliable market for milk (w/ reliably payments)
- Increased asset values of cattle

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# Many members families have long standing relationship with coop

Number of services	Average years of membership
0 to 1	16
2 to 4	17.4
5 or more services	17.6

*“We have been selling our milk to the Dairy for as long as our Society was established. Our Milk has built the Dairy. We even bought shares there so we are shareholders” – Central Kenya Dairy Farmer*

## Member sentiments exemplify strong emotional ties and association to the cooperative

*“I cannot allow my milk to be sold anywhere else other than the Dairy. I don’t even have the strength to chase the brokers to pay me”*

*“For over 30 years I have sold milk to the Dairy. I will continue to sell there.”*

*“Being a member was such an exciting experience for me. When my husband passed on I took over his number and to date I have continued being a member.”*

*“We are members forever and will not cease to be. By the way, when we do not agree with the society we stop taking our milk here as a group. There is a time we all moved to a private company and sold our milk there for a while. When the leadership reorganized itself, we all came back as a group again”*

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# Trust in cooperative and traders varies significantly between members and non-members

Community Institutions That Farmers Trust	Member Trust	Non-Member Trust
Church	92%	89%
Family	87%	89%
<b>Cooperative</b>	<b>72%</b>	<b>16%*</b>
Banks	68%	70%
Government	55%	55%
Agro-vet	53%	60%*
School	39%	32%*
<b>Milk Trader</b>	<b>38%</b>	<b>54%*</b>

# Trust levels vary across coops in different milk-sheds

## Milk-shed A

Community Institutions That Farmers Trust	Member Trust	Non-Member Trust
Private Dairy	75%	61%*
Cooperative	72%	16%*
Milk Trader	38%	54%*

## Milk-shed B

Community Institutions That Farmers Trust	Member Trust	Non-Member Trust
Milk Trader	59%	41%*
Cooperative	54%	26%*
Private Dairy	43%	40%

# Comparing member satisfaction levels between a high performing and low performing coop

Satisfaction With Cooperative	High performing	Low performing
Relationship between members and management	91%	57%
Members ability to communicate to cooperative leadership	88%	64%
Communication to members	86%	70%
Explanation of coop rules	83%	71%
Enforcement of coop rules	83%	66%
Timeliness of payment	77%	63%
Milk Trader	28%	11%

# Challenges to Member Loyalty in Agricultural Cooperatives?

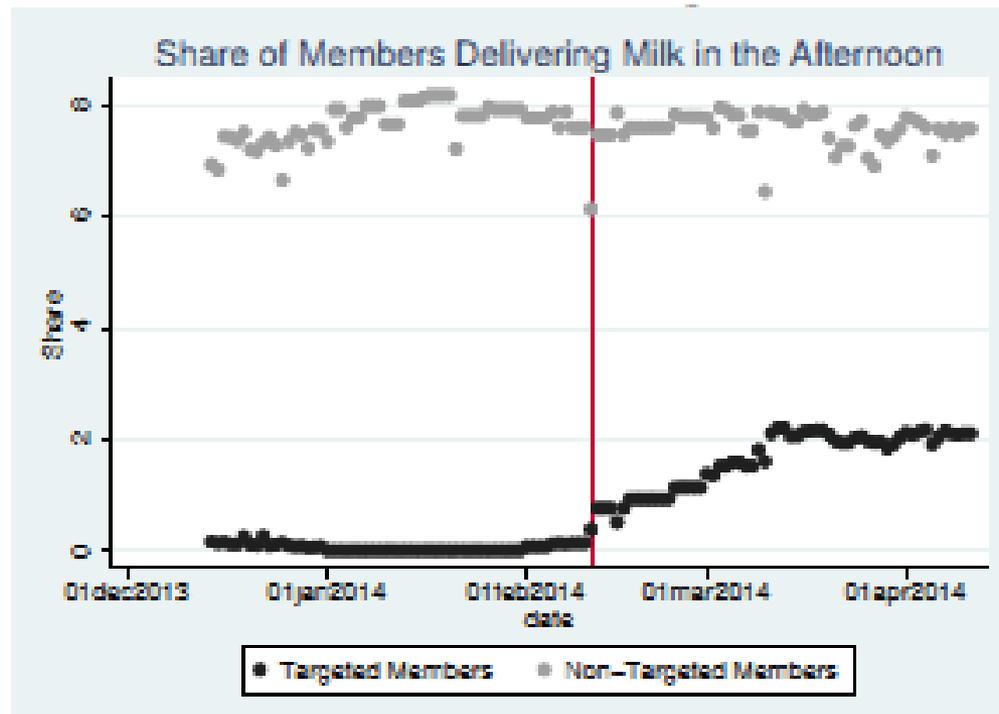
- Challenges with enforcements, penalties and rewards
- Implications of heterogeneity on organizational governance
- Clusters of Good Practices & Performance
- Competition
- Coop as fragile institutions

# A Story from a Kenya Dairy Coop

- Low Loyalty – systematic “side-selling” of afternoon milk
- Explicitly against society by-laws.
  - Financial penalties,
  - Refusal to buy
  - Expulsion from society
- February 2014, issue forcefully restated during Members’ General Assembly + Letter sent to non-complying members
- Lessons from responses ...

# A Story from a Kenya Dairy Coop

- On average, positive response



- Hides a lot of “exit” – i.e., some members stop delivering altogether

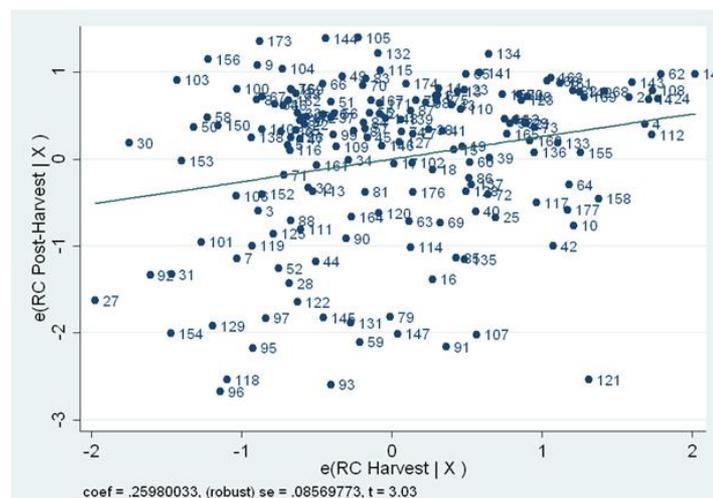
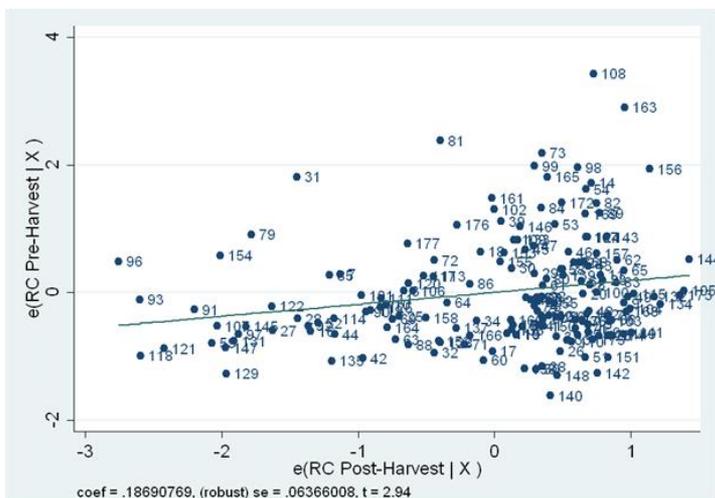
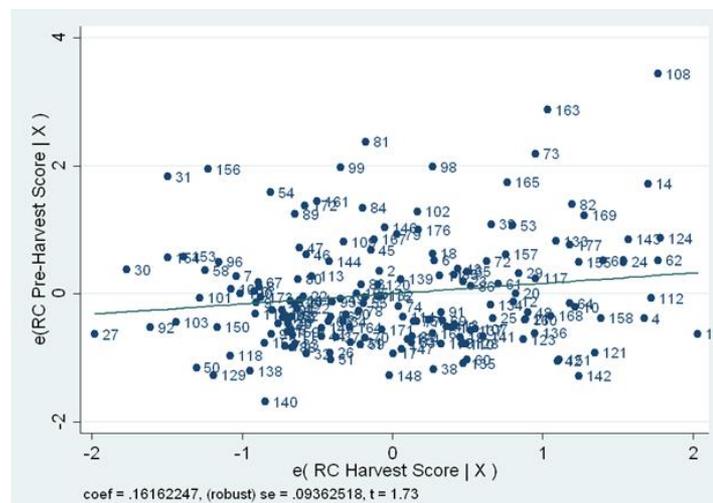
# A Story from a Kenya Dairy Coop - Lessons

- Additional letter reminding penalties partially crowds-out response among members that attended the general assembly
  - Intrinsic vs. extrinsic motivation
- Why might be difficult to enforce sanctions in the by-laws ?
  - Ex-post survey of non-compliant members reveal heterogeneity in beliefs about the legitimacy of the sanctions.
  - This heterogeneity in beliefs is not driven by differential knowledge of the bylaws
  - But it strongly correlates with trust in board management
- What do managers do? → They manage relationships → must create a “common understanding” of what the society is about

# Coops as Heterogeneous Institutions

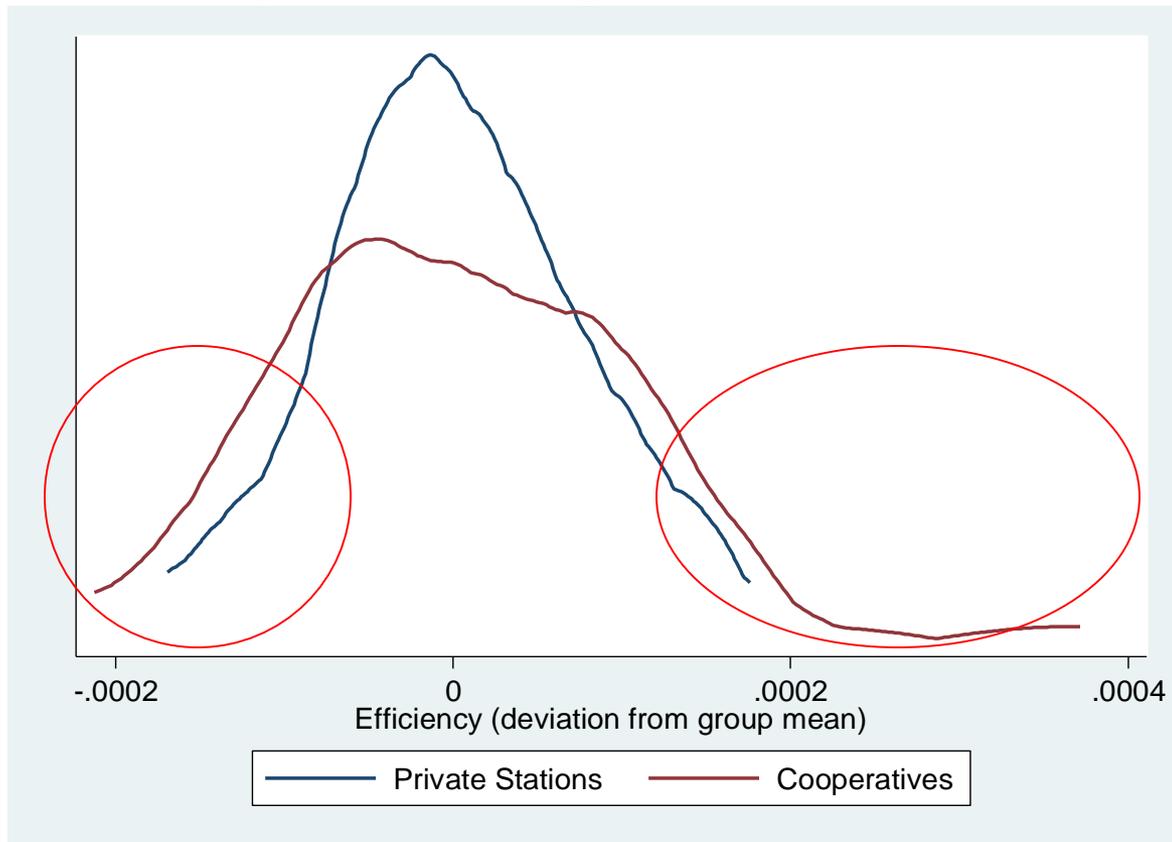
## Unconditional Correlations

	<i>Pre Harvest RC Score</i>	<i>Harvest RC Score</i>
<i>Harvest RC Score</i>	<b>0.211***</b>	
<i>Post Harvest RC Score</i>	<b>0.221***</b>	<b>0.321***</b>





# Coops as Fragile Institutions



# Access to Finance: Credit, Insurance, and Savings

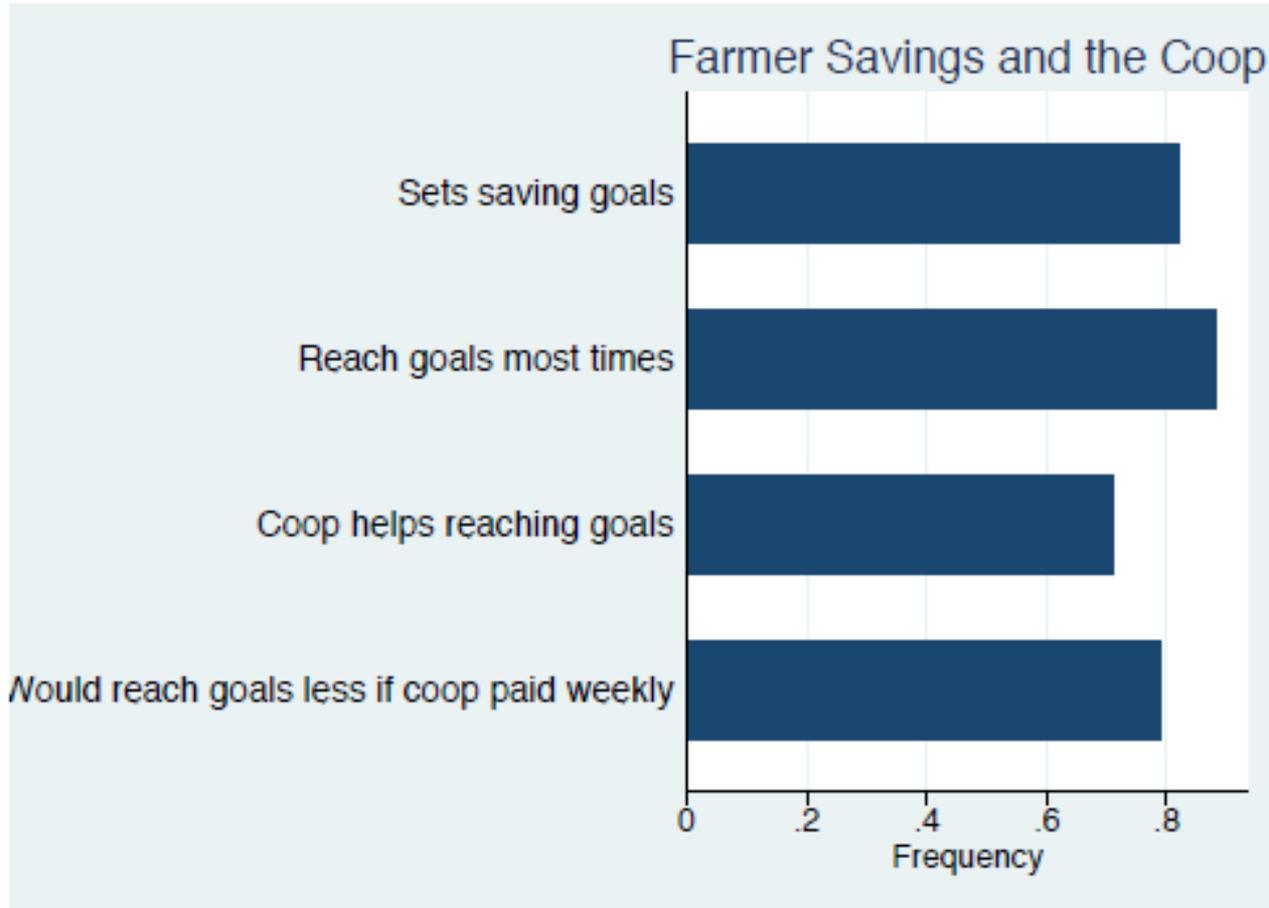
- Well-studied role of farmer based organizations in providing members
  - **Credit** (in kind, or cash):
    - Input loans
    - Consumption smoothing
  - **Risk protection**
    - Price stabilization
    - Implicit insurance products
- We focus on a less-studied financial service: **saving**
  - Growing evidence that constraints in these markets hamper investments, productivity, and growth (Karlán et. al, 2014)

# *Infrequent* payments as a saving device

## Evidence from a Kenyan Dairy Coop

- Farmers report the monthly payments help reach saving goals
  - E.g. Purchase of (lumpy) dairy feeds, school fees
- Farmers trust coop to make end-of-month payments, but smaller, itinerant traders cannot be trusted
  - Provision of this service is a *competitive advantage* for the coop (which can compete even at lower price)
- Many farmers sell to coop for “saving” and to traders for liquidity
  - Farmers selling at least part of their milk through the coop are more likely to have saving goals and to reach them

# Survey: Coop Payments and Saving Goals



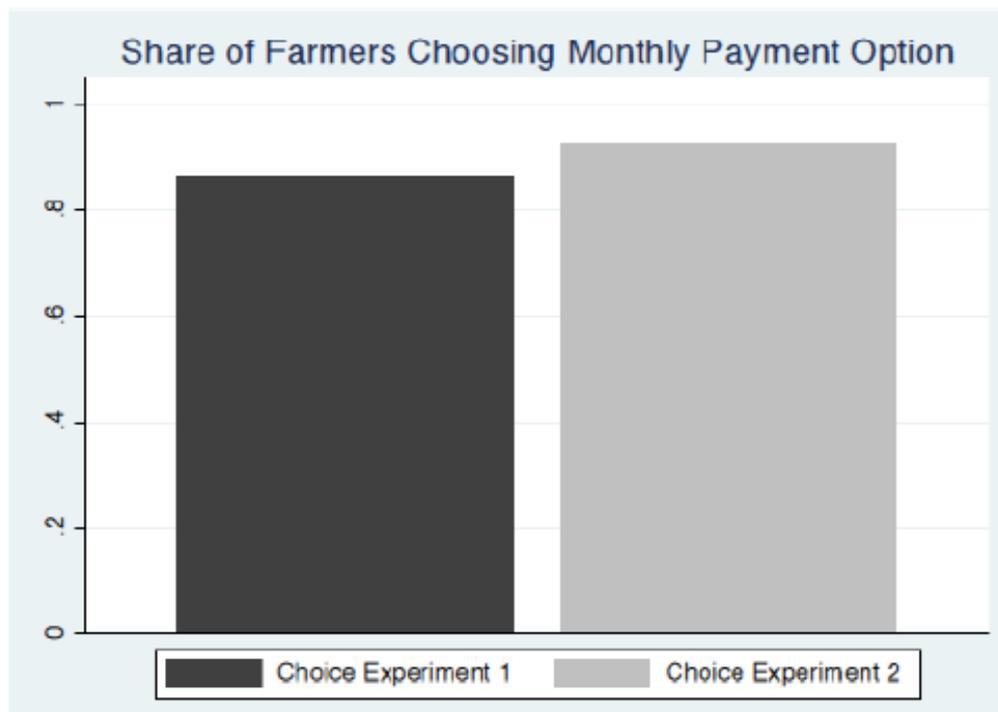
# Why are infrequent payments valuable?

- Lump small payments into a larger amount
  - Match lumpiness of certain expenses/investments
- Money is not accessible
  - Provide a *commitment* device
  - Farmers have a preference for tying their own (or their family members') hands
- Products from formal financial institutions typically do not offer these features
  - Bank products also have high opening deposit requirements, etc.

# Experiments: Payments Frequency

- How to test this hypothesis?
  - Ideal experiment: change payment frequency while keeping constant other things
- Two experiments run in partnership with the coop
  - E1: Farmers can choose between monthly payments and daily payments (+15% price increase)
  - E2: Farmers can choose between monthly payments and “flexibility option”

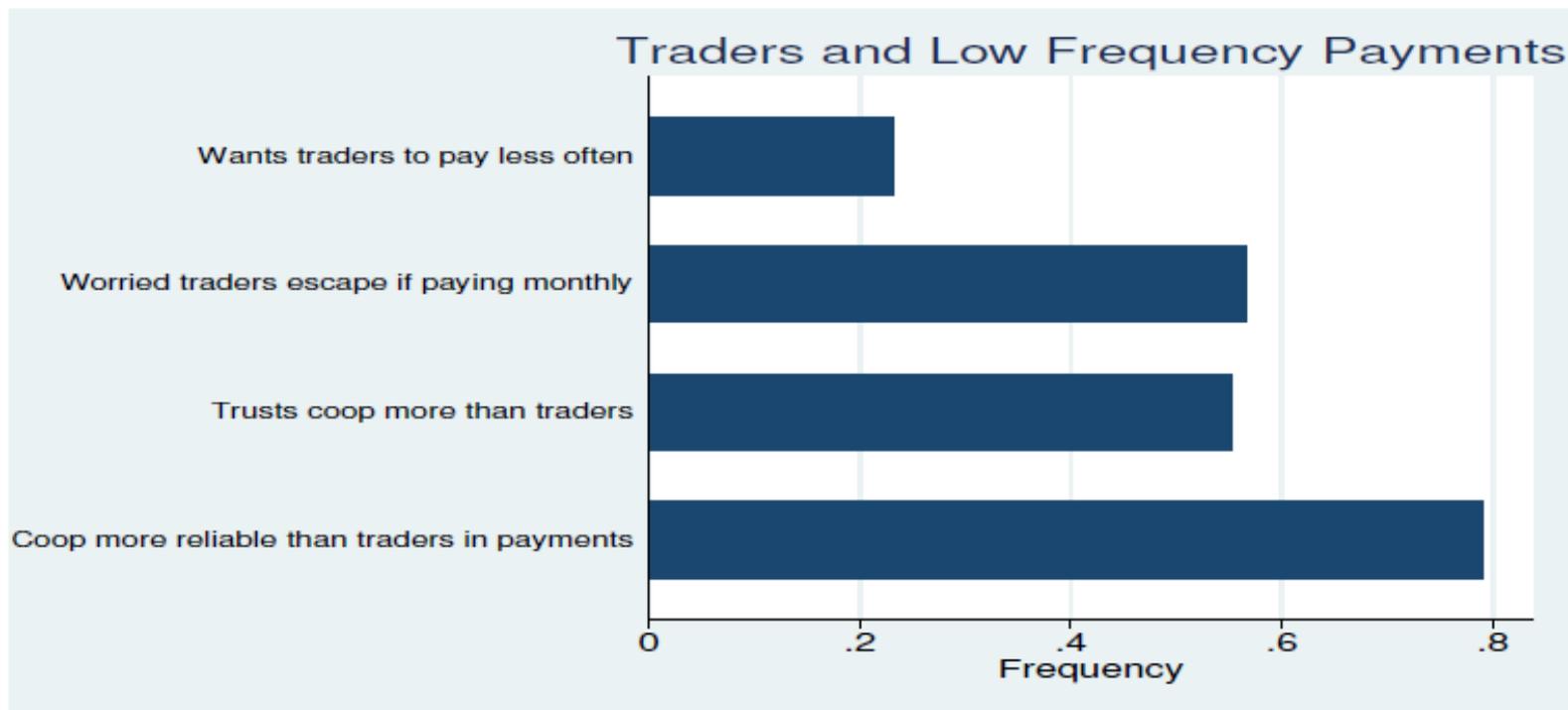
# Experimental Results



## Motivation for choosing monthly payments

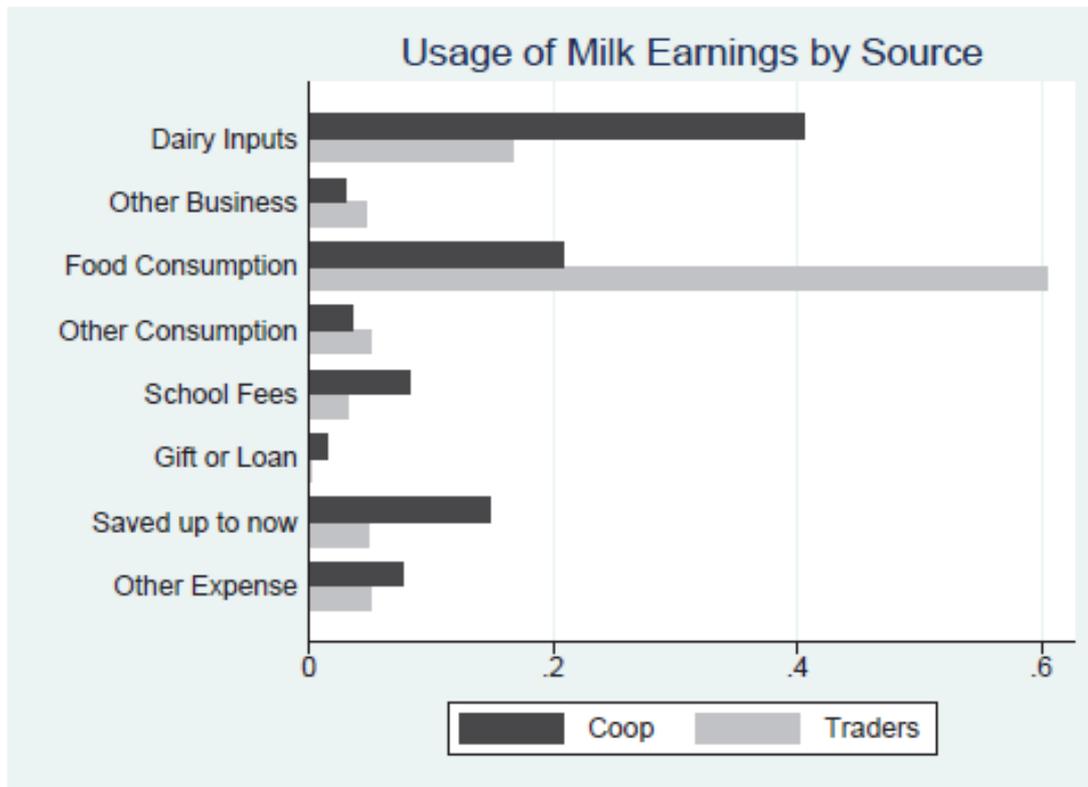
Answer	Choice Experiment 1	Choice Experiment 2
Saving target to reach	47%	42%
Do not trust <i>themselves</i> to handle cash	26%	36%
Spouse wants money on account at the end of month	14%	17%

# Survey: Traders



Farmers do not trust traders and do not want them to pay monthly

# Survey: Earning Source and Spending Patterns



Traders fund daily consumption, coop funds dairy inputs (lumpy)

# Top Take-aways

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*[Agrilinks.org](http://Agrilinks.org)*

**1. Though price received for goods is important, it is not necessarily the primary driver of loyalty**

**2. Services provided to members contribute to loyalty – some may be more tangible than others**

**3. Building trust is important to create loyalty, yet is challenging due to a number of factors including heterogeneity within membership**

**4. Loyalty is influenced by farmer needs - a combination of cash flow and savings needs influence who farmers sell to**

**5. Loyalty, competition and managerial ability contribute to differences in performance across cooperatives**

# *Questions and Answers*



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