

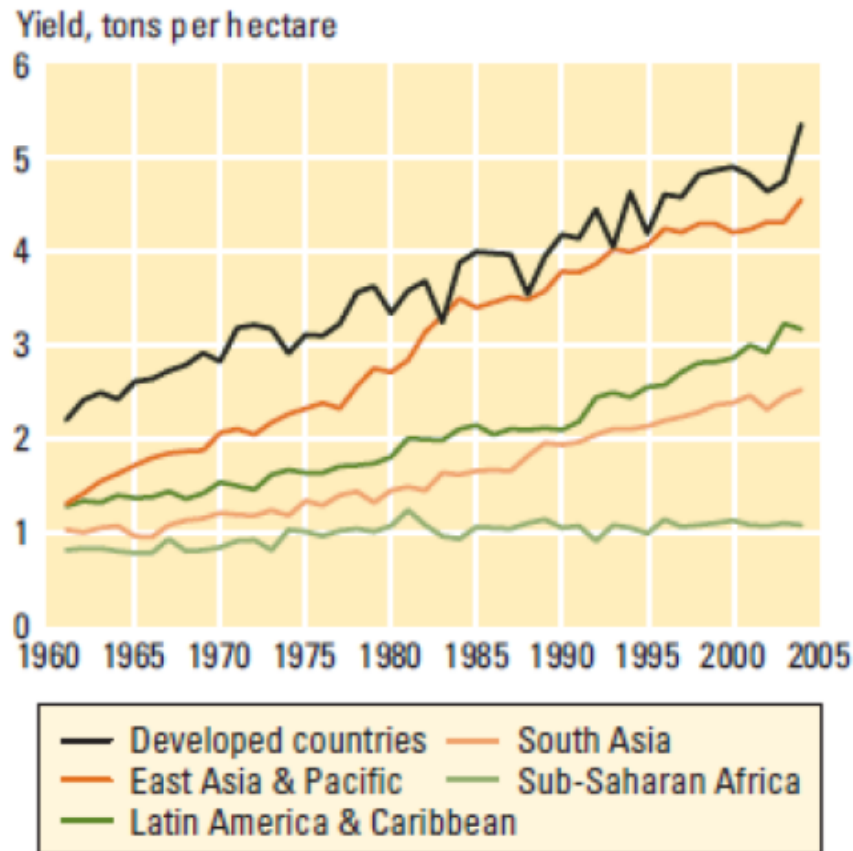
Mind the Gap Workshop

Christopher Udry, Yale University

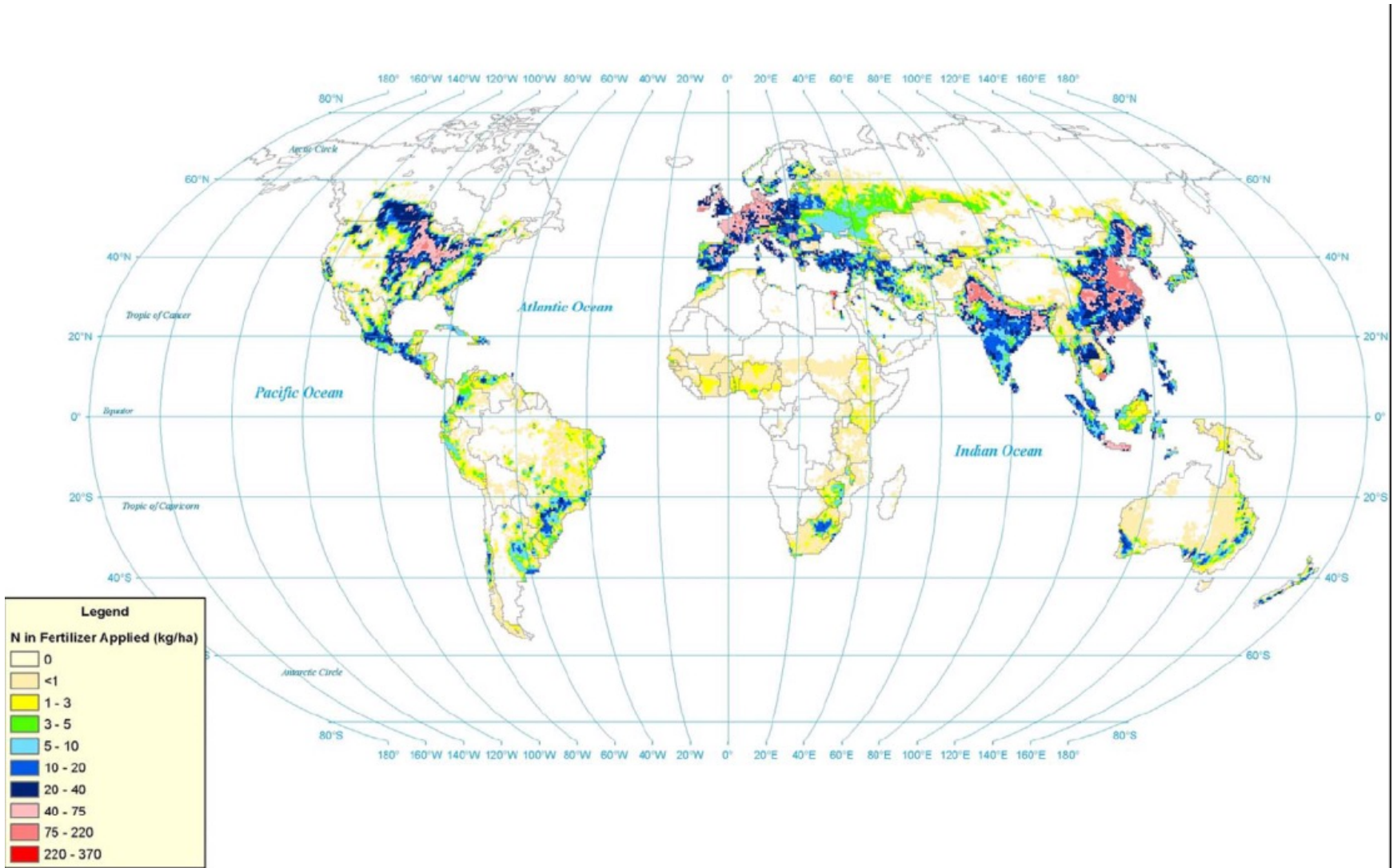
October 2016

Is the gap real?

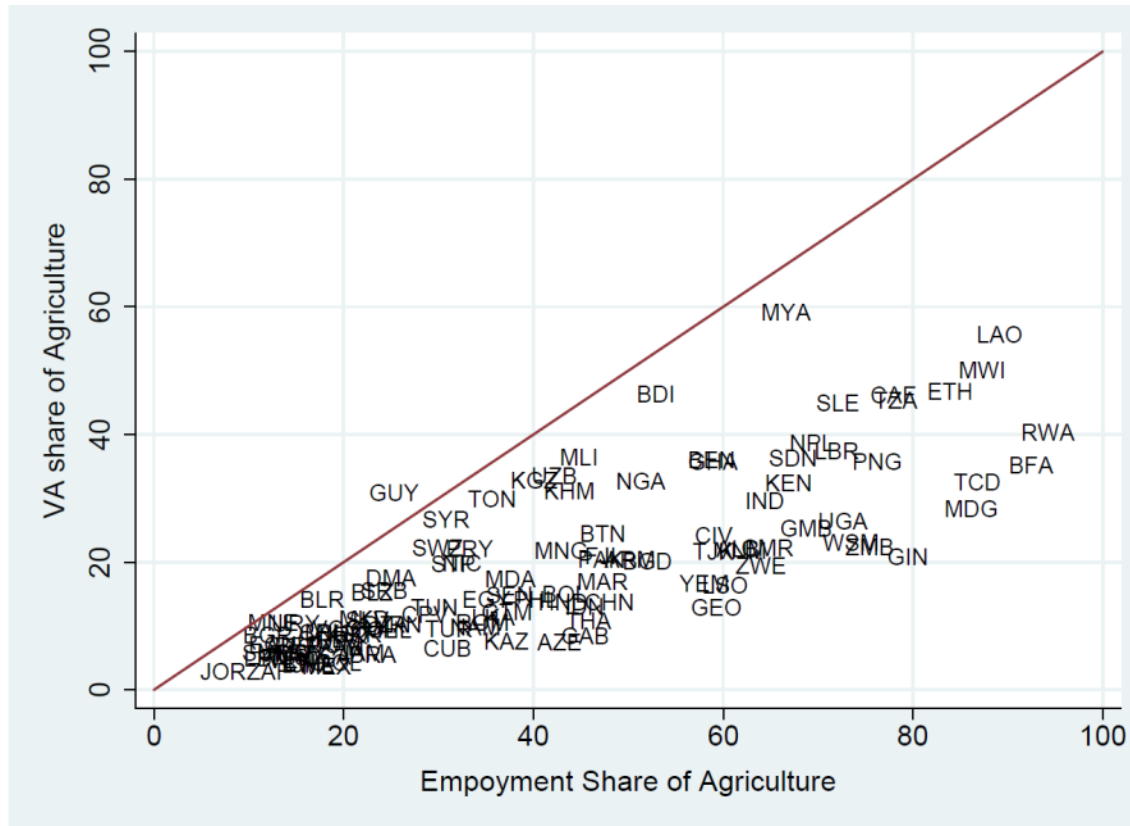
- We've all seen this:



- Input intensity is low



- Productivity is low relative to the rest of the economy



- But we'll discuss this more thoroughly later this morning

What are the primary barriers to adoption of new technologies and to intensification?

Financial dimensions

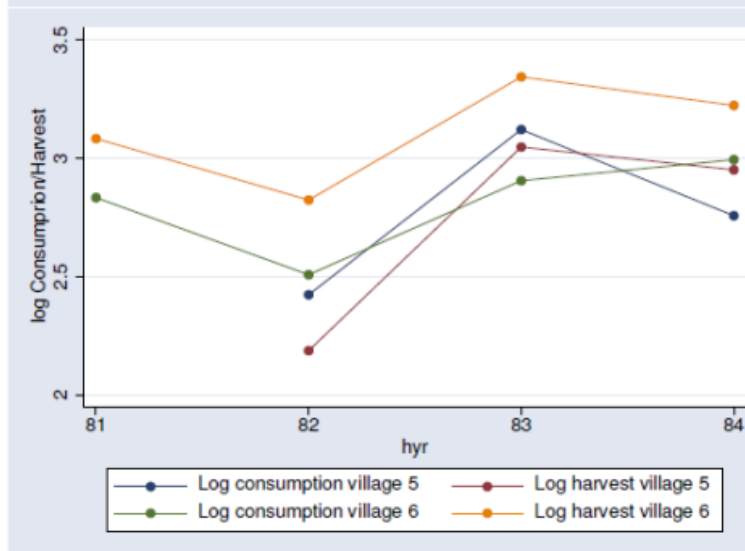
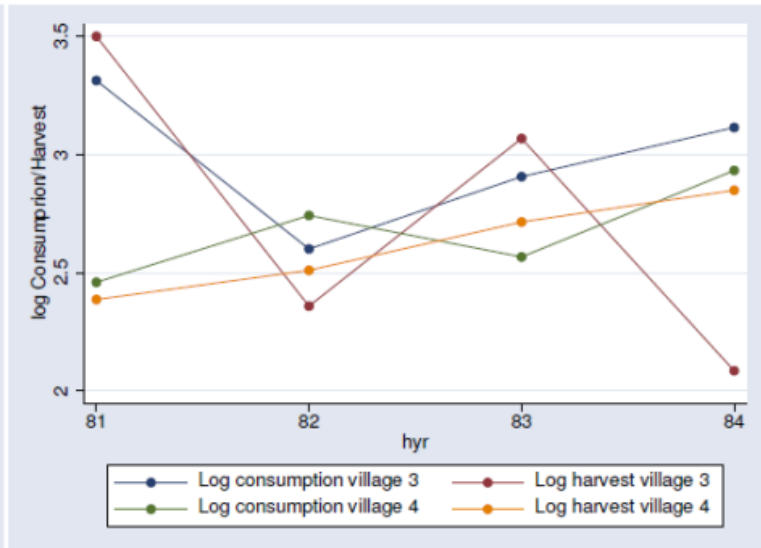
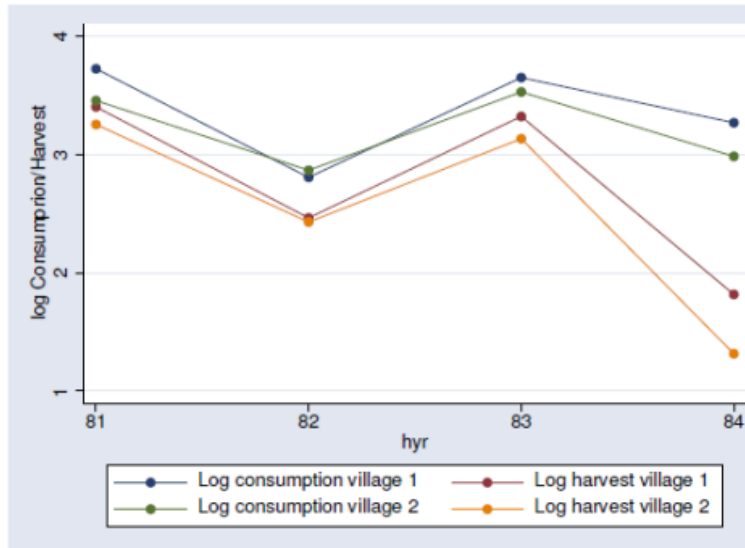
- Opportunity cost of capital
- Liquidity constraints
- Risk

- Opportunity cost of capital



- Liquidity constraints
 - Inflexibility, inability to raise funds to take advantage of opportunities, the timing of access to resources

- Risk



Constraints and Financial Innovation

Constraints	Instruments	Evidence
Returns		
Liquidity		
Risk		

Constraints and Financial Innovation

Constraints	Instruments	Evidence
Returns	Credit	
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Constraints and Financial Innovation

Constraints	Instruments	Evidence
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Liquidity	Savings	
Risk		

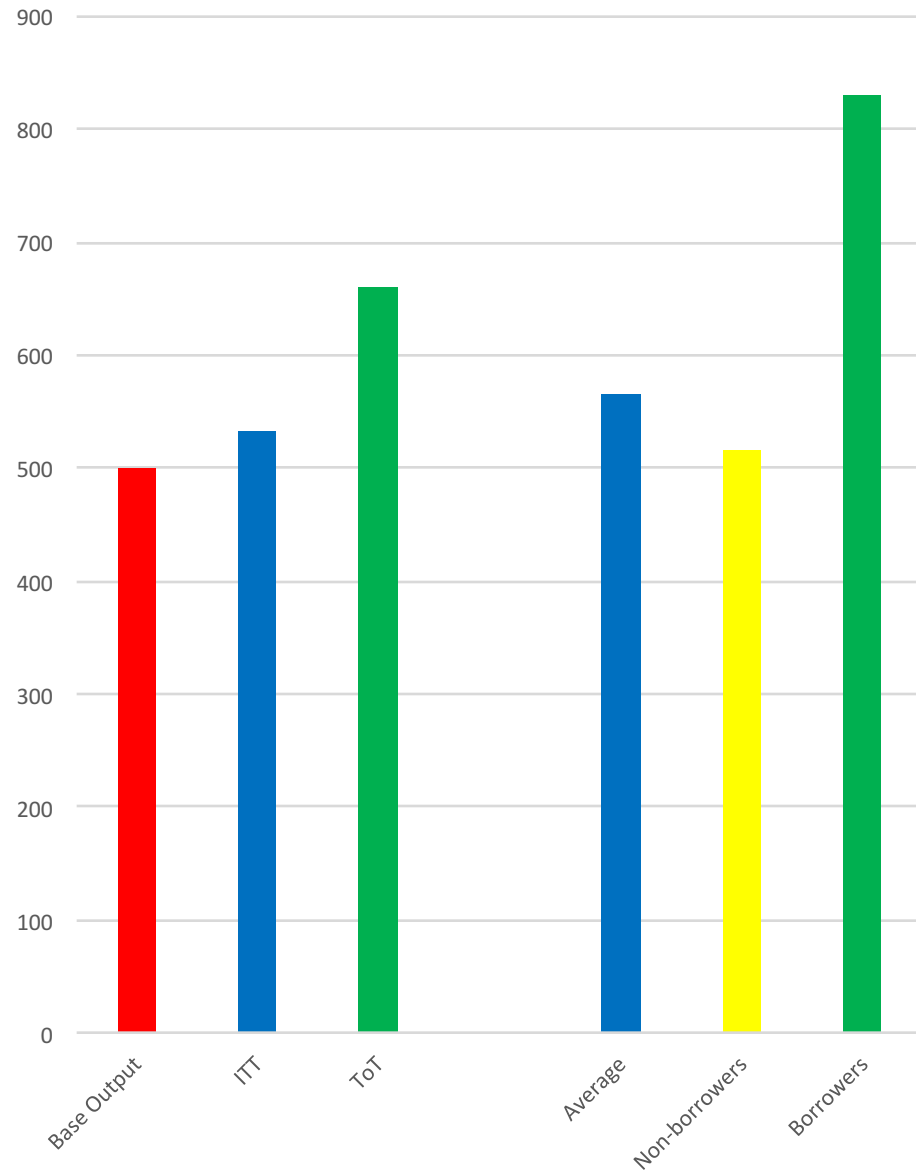
Constraints and Financial Innovation

Constraints	Instruments	Evidence
Returns	Credit	
Liquidity	Savings	
Risk	Insurance	

Successful Agricultural Lending

- is rare
- Mali: Soro Yiriwaso
 - Agricultural loans to women farmers
 - Individual loans with group liability
 - 25% annual interest + 3% fees + 10% required saving
 - \$110-120/woman
 - Avg input expenses \$200
 - Household gross output \$520
 - No default over 2 years

Impact of Access to Borrowing on Output



Constraints and Financial Innovation

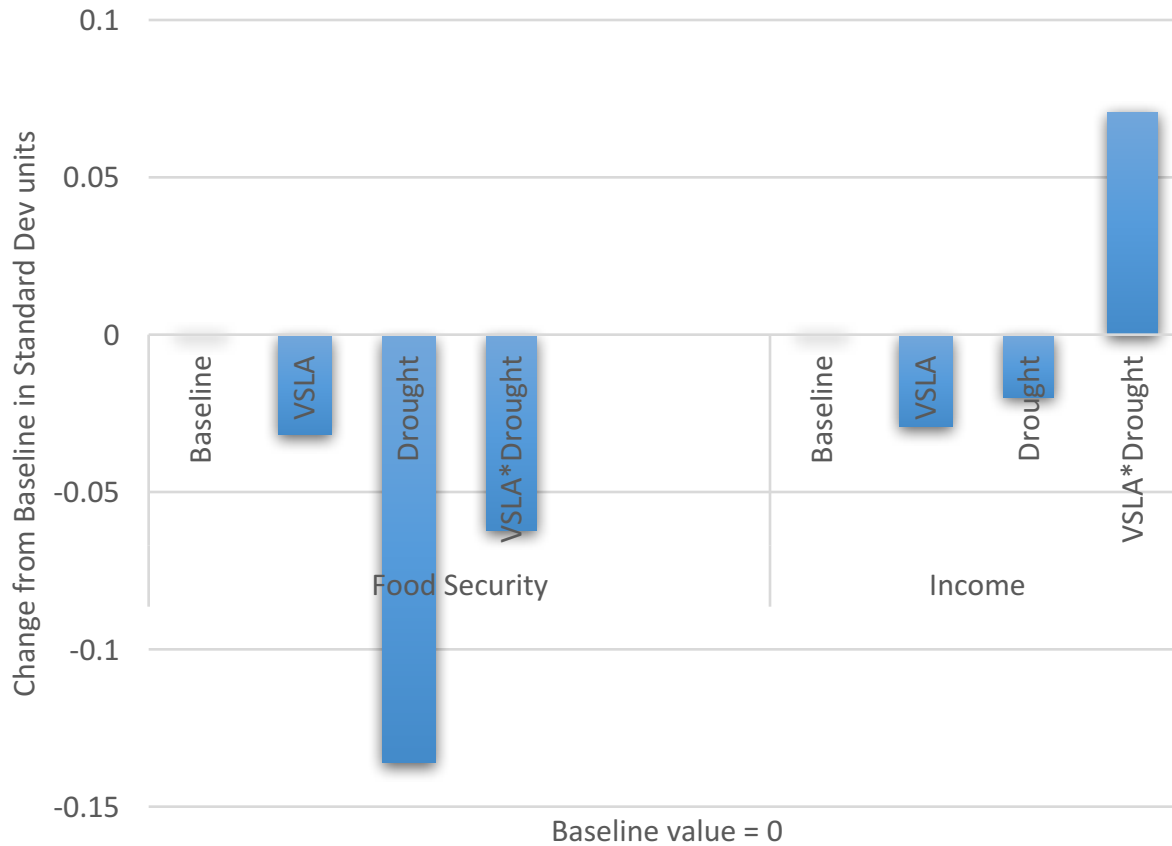
Constraints	Instruments	Evidence
Returns	Credit	Mali: on average binding, but varies locally
Liquidity	Savings	
Risk	Insurance	

Village Savings and Loan Association (VSLA)

- Developed in the early 1990s in Mali by CARE
- Aims to improve on the ROSCA model
- Basic Design:
 - Around 15-30 members who meet weekly (mostly women)
 - At each meeting members make savings contributions (commitment)
 - Members can take loans and repay with interest
 - At end of 10-12 month cycle, fund is shared out
 - Emergency fund
- Focus here is on Ghana, Malawi, and Uganda
- Sample of 15,000 households in 950 villages
- Implementation period: 22-30 months



VSLA in Uganda and Malawi in Drought and non-Drought Conditions



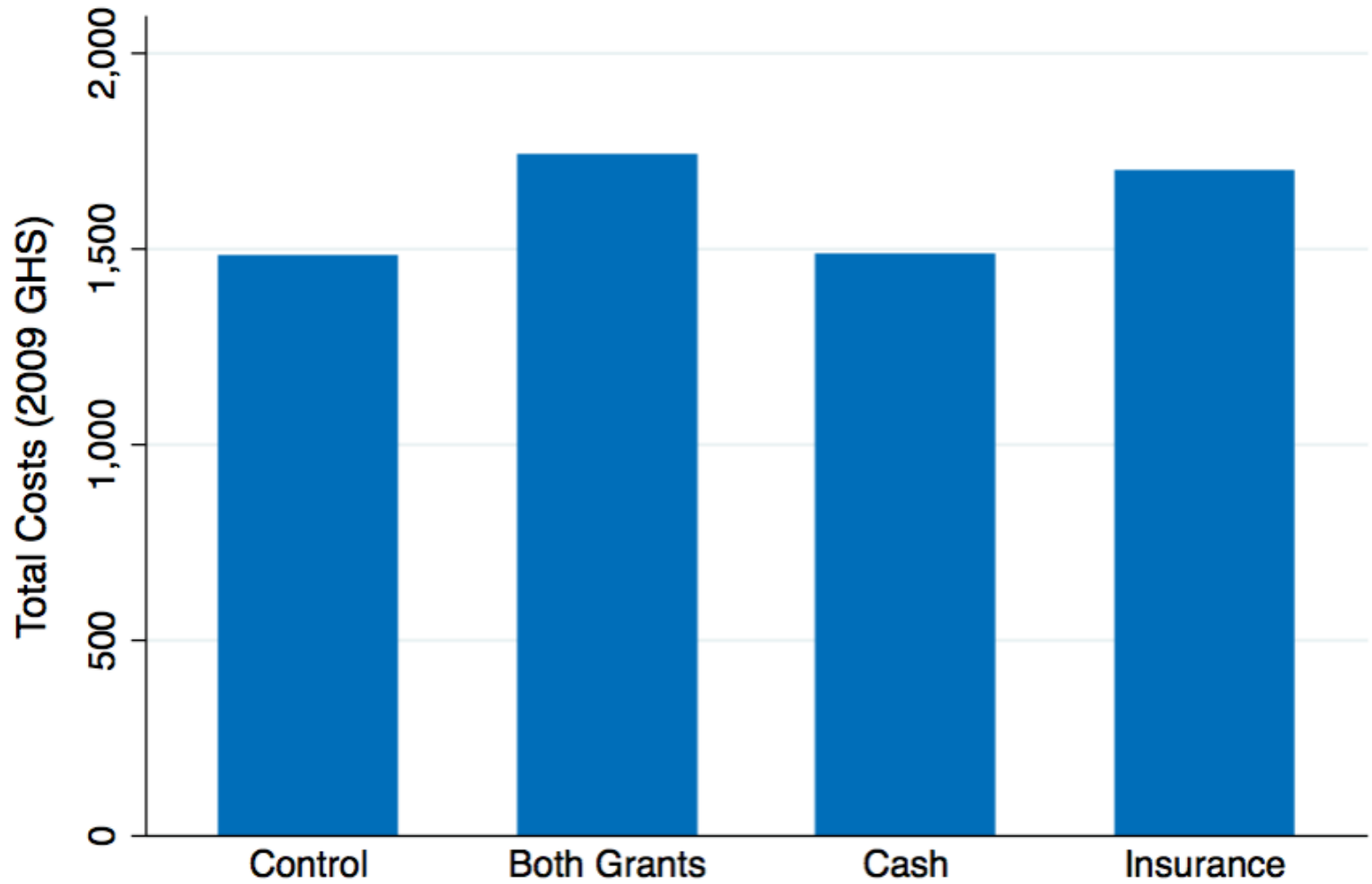
Constraints and Financial Innovation

Constraints	Instruments	Evidence
Returns	Credit	Mali: on average binding, but varies locally
Liquidity	Savings	Uganda and Mali: resilience in drought
Risk	Insurance	

Rainfall Index Insurance

- 2008-2012, 84 Communities, 1,406 Households
- Insurance: grants + subsidized sales (Actuarial value 8-9.5 cedis/acre, average of \$40)
- Cash grants (\$85/ acre)
- Insurance against drought and flood

Average Total Expenditures on Farming by Treatment Group



Constraints and Financial Innovation

Constraints	Instruments	Evidence
Returns	Credit	Mali: on average binding, but varies locally
Liquidity	Savings	Uganda and Mali: resilience in drought
Risk	Insurance	Ghana: strong impact on investment, but varies over time

Financial constraints and missed opportunities

- Imperfect credit markets
 - Wide-ranging evidence; few counter-examples
 - Successful agricultural credit market interventions rare
- Constraints on saving
 - Growing evidence, but varying results
 - Ties into behavioral literature
- Incomplete insurance
 - Evidence very strong against full insurance
 - Centrality for investment choice less clear
 - Index insurance products remain problematic
- Investment returns?