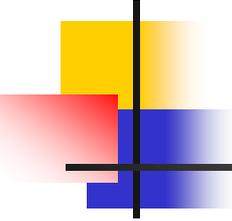


# Pathways by Which Improved Information Can Affect Market Performance: Implications for Evaluation of MIS Impacts

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John Staatz  
Michigan State University

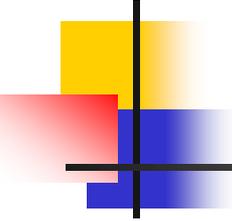
Workshop on Agricultural Market Information Systems  
in Africa: Renewal & Impact  
Montpellier, France, 29-31 March 2010



# Key messages

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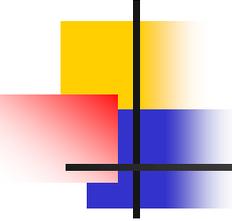
- Complementarity between public and private activities to improve market information
- MIS can improve market performance both through
  - Direct impacts on decisions of private actors:
    - Spatial and temporal arbitrage
    - Production decisions
  - Indirect effects via:
    - Complementarity with other hard and soft infrastructure (e.g., roads, credit programs),
    - Impacts on improving government policies



# Key messages

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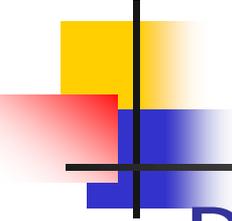
- Yet as one moves towards these more round-about impacts of MIS, it becomes increasingly difficult to quantify the impact of MIS due to:
  - Problems of attribution of impacts to the MIS actions vis a vis other complementary and often contemporaneous actions (e.g., market reforms)
  - The difficulty of specifying the counterfactual (in terms of the policy environment) for the without-MIS situation.



## Why try to estimate impacts?

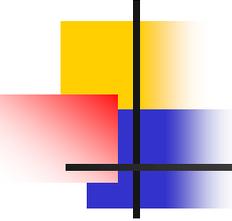
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- Conceptual links between better information and improved market performance
- Reasons why private investment may lead to insufficient provision of market information
  - Indivisibility
  - Non-excludability
  - Uncertainty
  - Lack of effective demand among the very poor
- New ICT may change some of these reasons (e.g., non-excludability), increasing role for private info. provision
- Question remains: At margin, how much to invest in public provision of market information relative to other programs?



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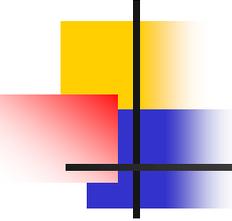
Pathways from better  
information to better market  
performance: implications for  
evaluation



# Potential Direct Impacts of Better Market Information & Ways of Evaluating Them

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- Rent redistribution in short run– e.g., reduction in intra-market margins following introduction of MIS
  - E.g., early work on Malian MIS
  - Value consumer savings per kg times market volumes
  - Does not examine longer-run growth implications of such redistribution

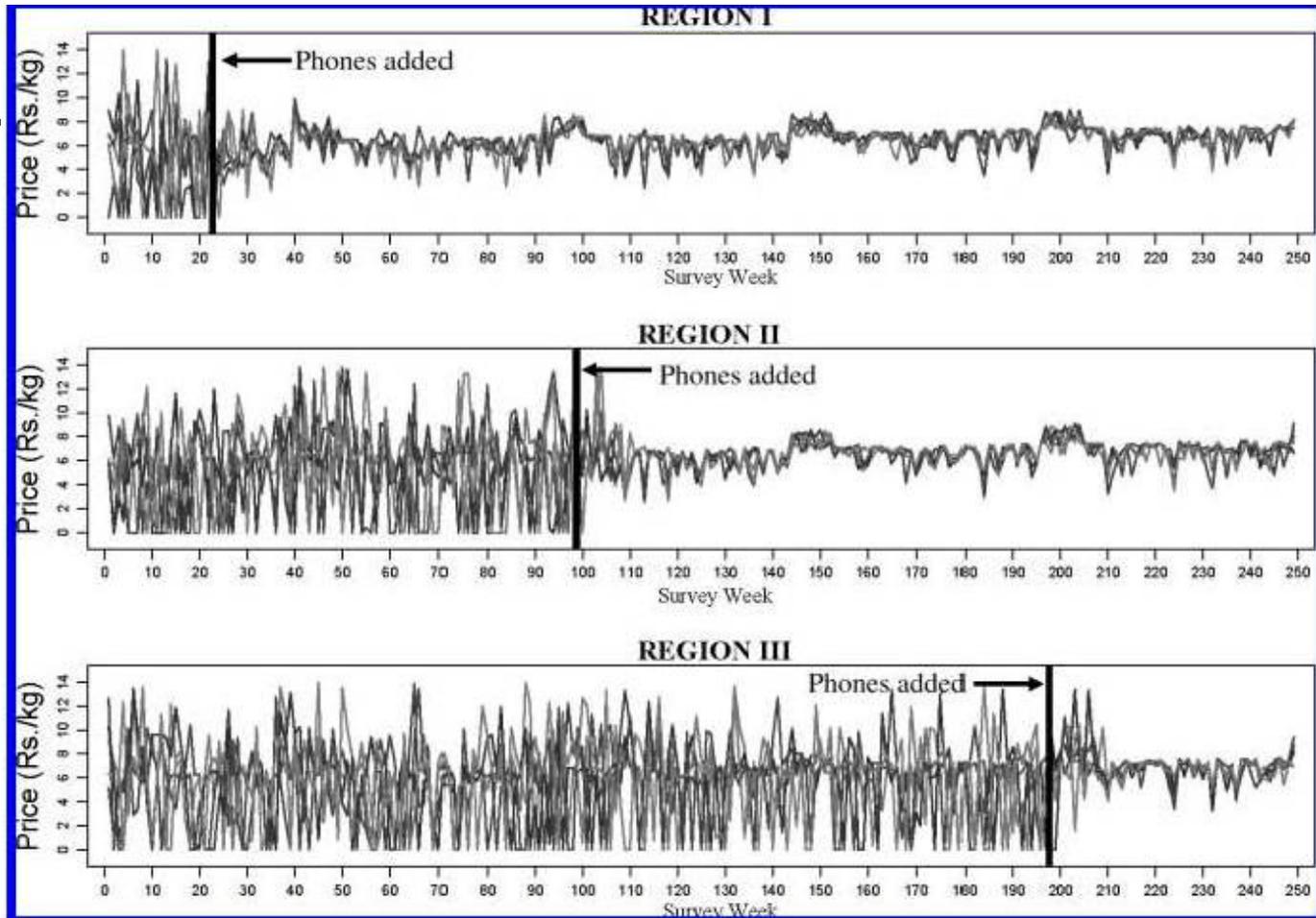


# Potential Direct Impacts of Better Market Information & Ways of Evaluating Them

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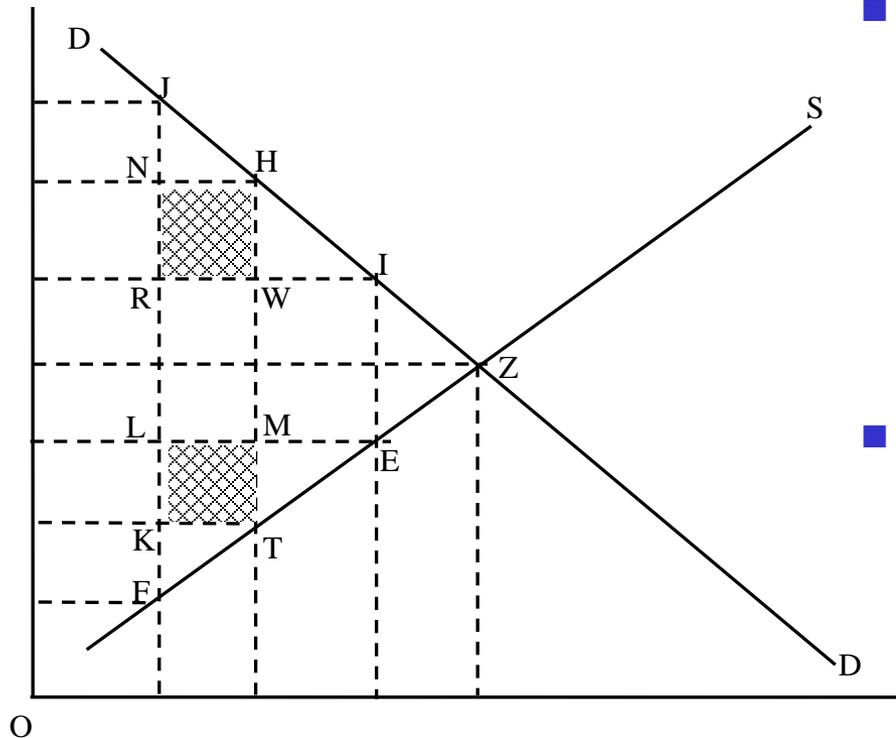
- Improved spatial arbitrage of existing production → more stable and possibly higher average prices
  - Examples:
    - Jensen's (2007) analysis of introduction of cell phones on Kerala fishermen's prices
    - Jenny Aker's (2009) analysis of impact of cell phones on marketing margins in Niger
  - Need good data; this approach captures 1<sup>st</sup>-round effects only—not longer-term growth or supply response

# Example: Fish Prices & Mobile Phone Service in Kerala



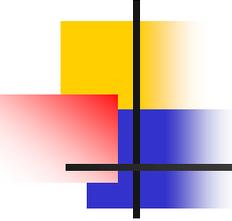
Robert Jensen. The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector. *Quarterly Journal of Economics*, CXXIII, 3 (Aug. 2007): 879-924.

# Potential Impacts of Reducing Actors' Price Forecast Error



Kizito (2008): Adopted from Hayami and Peterson, 1972

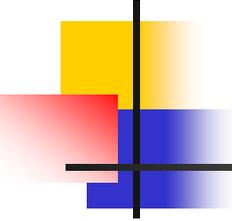
- Aim is to model (using social surplus models) the costs reductions of being off of the equilibrium price and quantity
- Constraints:
  - How to know reduction in forecast error?
  - Quasi-static
  - Estimates of D & S elasticities



# Estimates of with/without improved information over time

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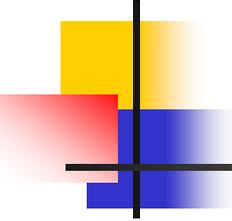
- Problems of attribution given the complementarity of information with other market improvements
- Better information as an input into better policies, which then improves payoffs to market information (both public and private)
  - Example of OMA in Mali
  - Problem for estimation of impacts → everything is endogenous!



# So how to measure impacts of more dynamic effects?

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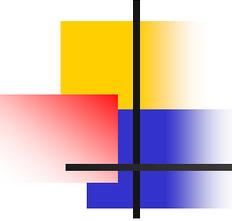
- User satisfaction surveys? Identifying what information comes from MIS vs other sources, including the market itself?
- Contingent valuation? Problems of stated preference vs. revealed preference?



# So how to measure impacts of more dynamic effects?

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- Revealed preference of funding by public sector or through a users' organization?
  - May be the most reliable indicator, but does this help you ex-ante?
  - Can you duplicate successful models from elsewhere?
    - Donor funding crowding out national funding?
    - Need an explicit transition strategy to national funding
- Are we pursuing an impossible objective in trying to precisely quantify the payoffs to improve market information?
- Quantify what you can, but then build credible stories on more dynamic effects



# Your suggestions?

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- Thanks for your attention and your help!