The value of price information to small farmers

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Main findings

- I summarize here the findings from several studies on agricultural prices and small farmers
  - 2 studies on coffee farmers in Uganda
  - 1 study of Indian farmers in Maharashtra
  - 1 study of producer prices in Niger

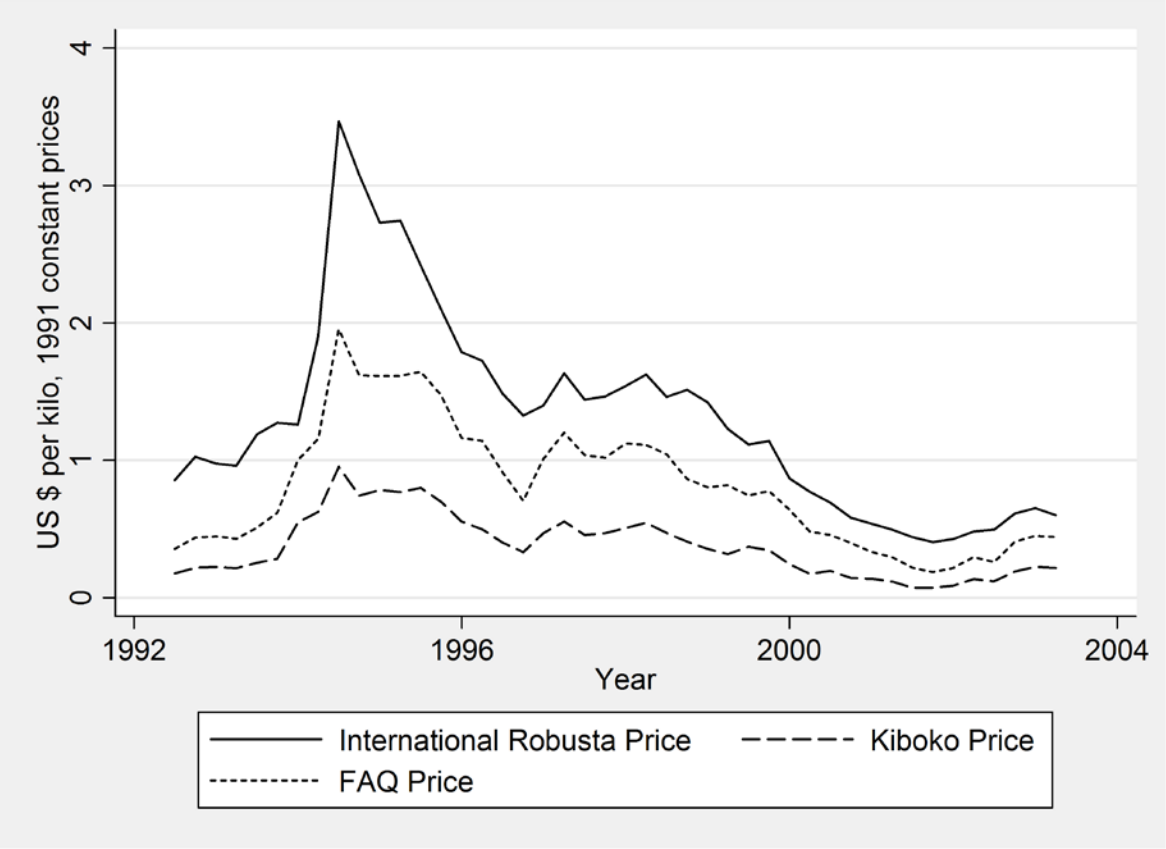
Why do Ugandan farmers sell at the farmgate?

- Using detailed survey data from Uganda, Ruth Hill and I examine whether coffee producers sell to itinerant traders at the farmgate, or directly to market, where they can get a higher price but must incur a transport cost.
- We find that selling at the farmgate is more likely when the quantity sold is small and the market far away.
- Similar to finding that the poor buy in convenience stores, where prices are higher. => demand for convenience by the poor?
- No. Other things equal, wealthy farmers are *more* likely to sell at the farmgate, possibly because the shadow value of their time is higher. But if they have a large quantity for sale (which they often do) they are more likely to sell in a market. They are also more likely to travel to a distant market. These findings are consistent with their better ability to pay for public transportation.

Price transmission to farmers

- In a second paper with Ruth Hill, we examine the transmission of a rise in world coffee prices to small Ugandan farmers.
- We find that prices paid by exporters and wholesalers in Uganda closely follow world prices
- But prices paid to farmers rise proportionally less than world prices or Ugandan wholesale prices

Coffee prices in Uganda over time



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Coffee prices in our study

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Producer prices do not keep up

- This occurs in spite of massive competition among traders
- We argue that the evidence is consistent with excess entry by itinerant traders who purchase at the farmgate
- This can only happen if farmers are ignorant of the movement in export/wholesale price

Field experiment in Maharashtra

- Collaboration with Thompson-Reuters and the World Bank in India
- RML is phone-based commercial service sold to farmers
- RML provides price information on nearby wholesale markets
- We offer RML to small farmers for free

Field experiment in Maharashtra

- Large scale randomized controlled trial
  - 5 districts
  - 100 villages
  - 1000 farmers
  - 1 year
- We focus on smaller/more perishable crops for which prices are more variable

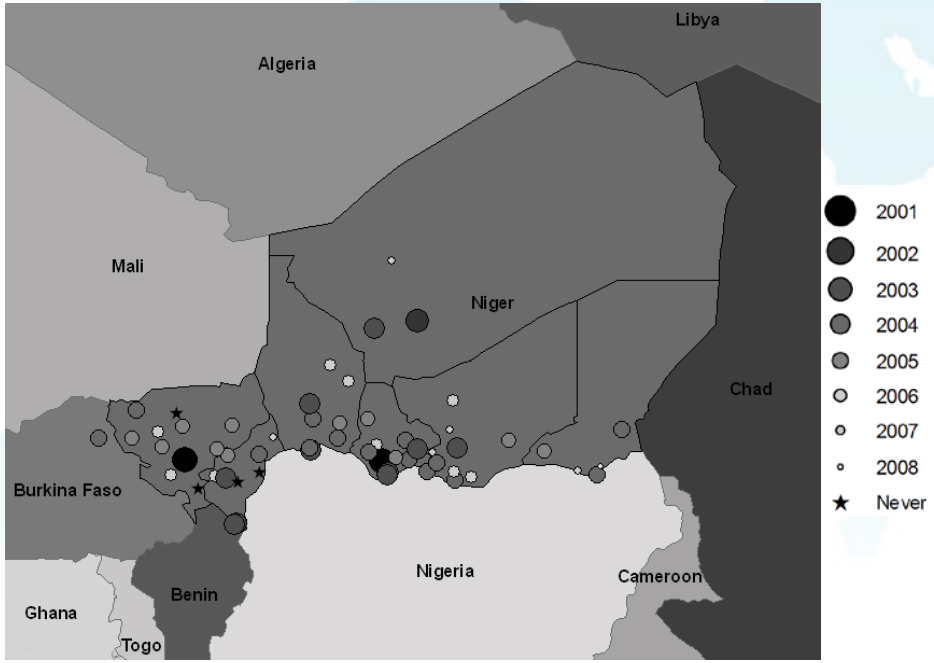
Field experiment in Maharashtra

- Most farmers sell in a single district market
- None sells in another district
- Farmers are happy with RML but
- We find no effect of RML on producer prices
- Except for the 50% of pomegranate farmers who initially were selling at the farmgate
- Similar null effects have been found in other studies in India and elsewhere

Cell phones in Niger

- Jenny Aker has documented the beneficial effect that cell phone introduction had on agricultural traders
- With Jenny we examine whether the introduction of cell phones affected producer prices
- We use the gradual roll-out of cell phones in Niger to identify the effect

Mobile Phone Coverage by Market



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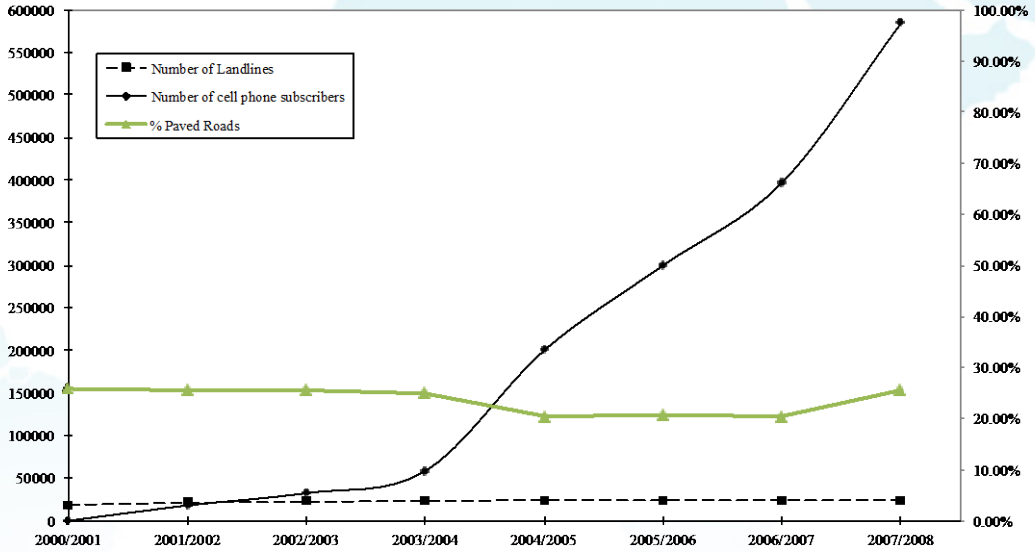
Mobile Subscribers, Landlines & Road Quality



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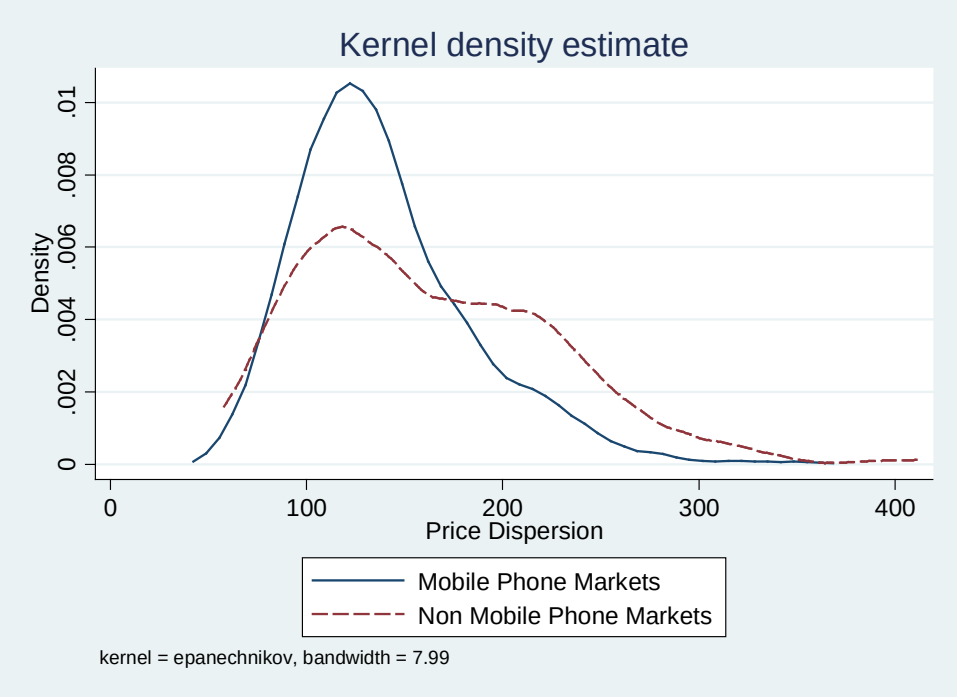
Dispersion of Cowpea Prices



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Cell phones in Niger

- We find no effect on the average producer price
- But we also find a reduction in the spatial variance in prices
- This is consistent with traders using cell phones to better select the village markets they visit so as to avoid over- or under-crowding

Conclusion: Do small farmers benefit from price information?

- Small farmers may be tempted to sell at the farm-gate to economize on transport costs
- By doing so, however, they may be cheated on prices
- This can be reinforced by excessive entry of farm-gate buyers when agricultural prices rise

Can price information increase the price small farmers get for their output?

- It depends:
  - If they otherwise would sell at the farm gate, yes
  - If they otherwise would sell at an organized market, no
- This is because farmers do not have a comparative advantage in spatial arbitrage across markets – traders do

What about providing price information/cell phones to traders?

- Some traders benefit (temporarily?) from the introduction of cell phones
- This facilitates their spatial arbitrage
- This reduces spatial price dispersion, and hence the variance of producer prices
- But it does not, by itself, increase the average producer price