Policies for promoting efficiency in food markets

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Outline

- Definition of market efficiency
- Policies to promote market efficiency
  - Roads and other infrastructure
  - Market information systems
  - Agricultural market liberalization
  - Deregulation of trucking industry
  - Taxation
  - Competition policy
  - Predictable policy environment
- Conclusions
Definition of market efficiency

- **Operational efficiency**: Marketing costs are as small as possible
  - Factors that may raise costs: poor infrastructure, lack of credit, lack of security, etc.

- **Exchange efficiency**: There are no unexploited opportunities for mutually beneficial trade
  - Factors that prevent mutually beneficial trades: lack of information, market power (collusion), and risk associated with government policy

Roads and other infrastructure

- How do better roads reduce transport costs?
  - Lower fuel consumption,
  - Lower maintenance costs,
  - Slower depreciation of vehicles,
  - Lower tire replacement costs,
  - Less spoilage due to smoother and faster trips
Roads and other infrastructure

If cost of shipping to/from port is high, international trade allows wide band of food price movement.

If cost of shipping to/from port is low, international trade allows narrow band of food price movement.

Evidence

- Loveridge (1991): road improvement in Rwanda led to smaller price differences between two markets and increased the correlation of their prices over time.
- Minten and Kyle (1999): cost of transportation on poor roads twice as high compared to paved roads in Zaire (now D.R. Congo).
- Buys et al (2006): Indicates 1% increase in road quality in Africa leads to a 2% increase in trade between countries.
Roads and other infrastructure

Evidence
- Thorat and Fan (2007) estimate rate of return to 7–8 types of public investment in India, China, Thailand, and Vietnam
- Roads are 2nd or 3rd, behind agricultural R&D and education, but ahead of electricity, telephones, subsidies, irrigation, etc.

Market information systems

- Transaction costs: Cost of finding buyer/seller, negotiating trade, and enforcing deal
- Large component of marketing costs
- Can be reduced with
  - Market information for traders and farmers
  - Standard units of measure
  - Grades and standards for crops
  - Code of conduct among traders and enforcement through association
  - Information on reliability of traders
Market information systems

Akers (2005) study

- Topic: spread of mobile phones in Niger over 2001-2006
- Results: Mobile phone usage
  - Reduced the grain price spread between markets by at least 6.4%
  - Reduced inter-seasonal price differences by 10%.
  - Effect was greater in more remote areas and areas with poor roads.

Agricultural liberalization

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<th>Effect on marketing margins</th>
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<td>Lutz et al, 1994</td>
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Deregulation of trucking industry

Types of restrictions
- Administratively set freight rates
- Strict licensing requirements
- Routes fixed by licensing
- Restrictions on backhaul
- Protection of local trucking industry
- Freight queuing system
- Bilateral agreement on freight sharing

Country | Effect of trucking deregulation
---|---
Czech Republic | Entry of new companies, innovation
France | Dramatic reduction in transport prices
Indonesia | Entry of new companies, competition
Mexico | Lower costs, higher frequency, speed in delivery
Morocco | Dramatic reduction in freight rates
Rwanda | Transport costs fell 75% in real terms

Source: Teravaninthorn and Raballand, 2008
Taxation of transport sector

- Taxation via fuel tax most common
- Earmarking part of transport taxes to infrastructure
- Taxation via trucking license favors capacity utilization
- Local taxation can lead to high overall rates of taxation and/or “side-payments”

Promoting competition in marketing

- Competition policy
  - Avoid government role in pricing or allocation of freight (“regulatory capture”)  
  - Avoid giving transport association a role in licensing, pricing, or allocation of freight
  - Reduce barriers to entry (e.g. strict licensing)
  - Allow competition between local and foreign transport services
Policy environment

Importance of predictable policy environment

- In short run, frequent, unpredictable changes in tariffs, import permits, price policy, etc cause losses among traders
- In long run, traders withdraw from international trade, storage, and other activities subject to policy reversals
- Increases risk premia and cost of trading activity
- Increases spread between prices