

# Where to Sell? Market Facilities and Agricultural Marketing in India

Poor farmers will benefit most from adding extra facilities in the market place

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Rural areas are home to the vast majority of the world's poor. As most of the rural poor are engaged in agriculture, diversification and commercialization of agriculture are often essential pre-conditions for rural income growth and poverty reduction. Transportation costs and the characteristics of the nearest market influence the transaction costs of taking products to the market. For instance, a highly congested market with few facilities can add substantially to waiting time, product deterioration and losses, and costs to farmers and traders. Investments in market infrastructure and facilities and in rural road networks now form a core of rural development strategies in many countries.

We utilize data from a 2005 survey of farmers, traders, markets and villages in the Indian state of Tamil Nadu to examine how facilities available at the market influence farmers' decision to sell at the market. By relating farmers' place of sales to their level of sales, we also estimate the distributional consequence of an improvement in market facilities.

In our study the interaction of market facilities and distance to market from a farmer's village is captured by a market access index, which is a ratio of a number of facilities available at market to the square of the travel time from farmer's village to that market.

## Wealthier Farmers Benefit More in Congested Markets

Trading in agricultural produce in India is governed by the State Acts, which prescribe the setting up of a network of state controlled "regulated markets", where commodities grown in the surrounding area are required to be taken to. Tamil Nadu has not completely enforced the Act, so in our sample only 10% of the wholesale markets are regulated. Thus, 53% of sales by the farmers in our sample were made at the unregulated wholesale markets, and about 45% at the farmgate (with the rest in the village markets).

The majority of the markets are not completely specialized, are quite small in size and heavily congested, with limited infrastructure and facilities (see Table). Apart from having bus stations, police stations, commercial banks, and post offices, most markets offer few other facilities. The average travel time from villages to relevant markets is about 41 minutes.

Our analysis of how market facilities influence farmers' decisions shows that:

- An improvement in the market access index increases the likelihood of sale at the market, either because of a reduction in transportation cost or because of an improvement in market facilities;
- The wealth level influences a farmer's

decision to sell at the market, as wealth allows farmers to gain access to market facilities easily cutting waiting time in the congested market place.

Wealthy farmers are thus able to capture disproportionate benefits from the existing market facilities in a congested market place. They are perhaps able to avail of cheaper modes of transportation and to reduce waiting time and costs in utilizing the market facilities.

## Pro-Poor Policy Change

What if the market access index improves by 20%? Given the average market access index of around five in our sample, this increase translates roughly into adding an extra facility in each market. The results of our simulation show that in percentage terms, such policy change will

- Benefit all farmers with land up to 20 acres;
- Benefit disproportionately the poorer farmers, especially those with less than 2.5 acres of land — these will experience the largest percentage increase in sales — about 1%. In contrast, farmers with land of more than seven acres will experience less than 0.5% increase in sales.

A seeming puzzling contradiction of the simulation to our regression analysis above is not actually so perplexing because wealthy farmers already have better access to markets, and an improvement in market access benefits them much less compared with poorer farmers, who face much more stringent marketing constraints.

Thus, investments in market facilities and infrastructure (including transportation) will be pro-poor.

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### Market Facilities (selected)

Market characteristics	Tamil Nadu	Surveyed States (4)
Market area (average), acre	14	26
Number of shops (average)	282	181
Shop area (average), sq. feet	704	1001
Storage capacity (avg), sq. feet	31	93
<b>Facilities</b>		
Parking (all vehicles), %	10	33
Bus station, %	89	77
Commercial banks, %	84	78
Post office, %	84	75
Police station, %	89	81
Factory/mills, %	47	57
Guard, %	40	53
<b>Equipments</b>		
Large scale weighing machine, %	10	29
Grading machine, %	5	17
Fumigation equipment, %	10	5
Cold storage, %	5	6
Warehouse, %	5	44