



Daam Theek-Theek Lagao

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Amidst escalating food prices globally, the efficiency of the spot markets is a matter of great concern. While the Government has taken a number of steps to curb inflation, there have been no attempts to question the availability of adequate infrastructure at the ground level. The purpose of this paper is to explain the functioning of spot markets and determine their efficiency of operations through field research in different vegetable markets in Delhi.

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EXECUTIVE SUMMARY

It is interesting to note that the steady price rise hasn't invited any questions on the efficiency of the spot markets. The purpose of this paper is to understand the functioning of spot markets and evaluate its shortcomings. The number of facilities available to the farmers and traders are certainly better than they were a decade ago. But spot markets are still largely unorganized in comparison with the futures markets.

The prices of the commodities in the sabzi mandi are largely determined by demand and supply. The traders receive information from the sellers and buyers and try to sell the commodities as profitably as possible. Prices are fixed by adding the operating costs (transport, rent, wages for shop assistants) and profit margin to the cost price. Often, the determination of cost is not very easy because the produce is bought by the carton and sold by the kilo, and at times some of the produce has to be discarded because it's spoilt. Also, due to the scope for bargaining in the market, the quoted price and the selling price are not always consistent.

The exchange of information within the mandi's seems to be relatively efficient, since almost every trader is aware of the prices in other parts of the market. Perhaps the greatest problem plaguing the spot markets today is the absence of a benchmark price. Perishable goods like fruits and vegetables have highly volatile prices. Cold storage is the most basic facility that needs to be made available to the traders to bring about greater price stability.

The distribution channel is unnecessarily long and the transportation costs contribute significantly to commodity prices. Better transportation facilities will help shorten the distribution channel, and hence lower the time and costs for consumers, and ensure higher returns for farmers.

Consolidation of holdings by small farmers is essential to improve the process of improving agricultural efficiency. In the mandi's, auctioning could be a potent tool for price discovery if quality standards are set for the produce. Higher awareness, better marketing and closer integration with the derivatives market would help develop the spot markets significantly. Building better shops and improving access to information systems would also help in waste minimization and bring down price fluctuations .

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INTRODUCTION

“Aloo kaise diya?”

“12 rupay kilo.”

“12 zyada hai, bhaiya. Theek theek lagao.”

“Fixed price hai.”

“2 kilo le rahe hain bhaiya, sahi daam lagao.”

“Chalo madam, aapke liye 10 rupay kilo.”

It is simultaneously surprising and disturbing to note that a persistent rise in food prices has drawn no questions about the efficiency of spot markets. Futures trading has been banned on eight commodities since January 2007 .A Commodity Transaction Tax has been imposed and the export of pulses and rice has been banned in order to overcome the food crisis. The foray of retail chains into agricultural commodities was controversial, but no attempts were made to bring the sabzi mandi's (vegetable markets) at par with the retail chains in terms of convenience or quality of products. Trading in vegetable markets in India still follows rather primitive systems.

This paper attempts to explain how vegetable markets work: participants, transport, price determination; and to question its efficiency.

METHODOLOGY

Field trips were made to four vegetable markets – Azadpur, Sarojini Nagar, INA market and Laxmi Bai Nagar market. Small, medium and large traders were interviewed in all the markets to understand how they purchase and sell goods, assess their understanding of price determination, access to storage and transportation facilities, and awareness of parallel markets in the form of futures exchanges. Arhtiyas were interviewed in Azadpur. Secondary research helped substantiate the paper with figures and definitions.

WHAT IS A SPOT MARKET?

A spot market or cash market is a market where securities or commodities are traded for cash and delivered immediately, or within a short period of time. This paper only deals with spot markets for agricultural commodities, specifically fruit and vegetable markets in Delhi. Since these commodities are perishable, they are more susceptible to price fluctuations.

REGULATION OF SPOT MARKETS

The Agricultural Produce Marketing Committee (APMC) was established in 1948 to control regulated wholesale markets. APMC members include farmers, traders, cooperative marketing societies, banks, government officials and representatives of local bodies. Licensed commission agents and representatives of farmers and traders' cooperatives oversee the functioning of fruit and vegetable markets.¹ However, there continue to be a number of unregulated markets and unlicensed traders in the markets.

AZADPUR MANDI

Constructed in 1977 by the DDA, the New Sabzi Mandi (NSM) at Azadpur, the largest mandi in Delhi, is spread over 43.65 acres. In terms of arrivals, it's the largest fruit and vegetable market in Asia.² Traders from mandi's all over Delhi and NCR, and a few from other states buy their produce from here.

Despite adequate connectivity by autos, buses and cycle rickshaws, commuting to the mandi is difficult due to poor roads and diversions created by the metro construction. The mandi has a sizeable parking lot and a freezer next to it. There are

¹ Gandhi, V.P. & Namboodiri, N.V. (2002). Fruit and Vegetable Marketing and its Efficiency in India. Indian Institute of Management, Ahmedabad. Retrieved 10 July, 2008 from <http://www.iimahd.ernet.in/publications/data/2002-12-05vasantgandhi.pdf>

² APMC, Azadpur: <http://agmarknet.nic.in/azadpur.htm>

also 21 banks in the area³, ATMs and apartments for farmers/traders who need to stay overnight.

Beyond the parking lot, however, the mandi looks more like a fly-infested urban village. The rows of stalls, which serve as 'shops', have been allotted to traders by the DDA. According to APMC figures, there are 3644 wholesalers/commission agents selling 68 fruits and vegetables in the regulated market. Cows and trucks fill the streets. The mandi has 438 12 inch by 53 inch 'big shops' and 796 10 inch by 18 inch 'small shops'.

The large shops are rented by the arhtiyas or large traders. There are a number of unregulated traders who sell from handcarts or on the streets. Many of the traders live in a small jhuggi behind the shops.

There are a number of
Many of the traders
live

TRANSPORT Trucks of vegetables arrive from UP, Rajasthan, Himachal Pradesh and Punjab. Middlemen buy the produce from the farmers and bring it to Azadpur. The larger traders and arhtiyas⁴ buy vegetables by the bori (sack) and often sell through auctions. The weight of each sack varies according to the vegetable. For instance a sack of cabbages may have anywhere between 50-60 kgs of cabbages. The traders usually sell directly to the arhtiyas because they are the only ones who can afford to buy goods in bulk. The arhtiyas then sell the vegetables by the dhadi (5 kgs) to the smaller traders within the mandi or other large buyers. The payment is made to the traders by the arhtiyas after the produce is sold. The arhtiyas also make credit available to the smaller traders by allowing them to pay for the produce after selling it. However, no interest is charged on this credit. Similarly, the arhtiyas don't pay any interest to the traders from whom they buy the goods. The payment made by the arhtiyas depends on the rate at which he is able to sell his produce. They ordinarily sell it at a 3-4% commission on the price quoted by the seller.

³Sulekha.com. Banks in New Sabzi Mandi, Delhi. Retrieved 10 July, 2008 from

<http://yellowpages.sulekha.com/delhi/legal-financial-services/banks/4.htm?area=new-subzi-mandi>

⁴An arhtiya is a large trader who buys large quantities of fruits/vegetables from the trucks before selling them to the smaller traders.

Although many of the traders mentioned farmers, most of the produce seems to come from middlemen. Only very rich and affluent farmers transport their produce to the mandi. Others prefer selling it at a local mandi, where the middlemen buy it and transport it to Azadpur.

'More' is a retail chain belonging to the Aditya Birla Group. The procurement officer for More (Delhi and NCR) said that the MIS (Management Information System) officers deployed by the company send him data on the prices prevailing in various markets so that he can determine the rate at which he should buy the produce from the mandi. He then buys the vegetables/fruits and transports it to the respective outlets.

PRICE DETERMINATION

The determination of prices in the mandi is mainly on the basis of demand and supply. The rate at which the produce is sold depends on how much it costs, plus the profit margin. For instance potatoes from Punjab will probably cost more than potatoes from UP due to higher transportation costs. The traders claim there is a quality difference between the produce from different traders, and that justifies the cost. When the demand in the market for certain vegetables increases, the traders begin selling at a higher price. When the demand is lower, the price falls. The traders have sources in other mandi's to inform them of the demand movements. The buyers and sellers often haggle and bargain before arriving at the final price. The vegetables are auctioned quite often, which also helps in price determination.

Although there is an Azadpur Mandi Union that tries to fix the prices of the commodities each week, the prices are largely determined by demand and supply. The traders receive information from the sellers and buyers and try to sell the commodities as profitably as possible. Larger retailers stand a chance to make heavy profits in these markets due to the ignorance of the traders and the availability of capital. The lack of storage facilities leads to an appalling waste of goods. The foray of real estate developers into warehousing⁵ will probably only make more facilities available to large retailers, not to the smaller traders or even the arhtiyas. The trade in agricultural goods

Top realty players set to enter warehousing – Mint (1 June 2008)

is still largely unorganised, and derivatives don't seem to be a significant factor in the determination of prices.

FACILITIES

Although the traders have access to banks, parking, roads, and rest house for farmers, watchman and telephone, poor storage facilities eat into their profits. Since all the produce isn't sold in a single day, storage is the most basic facility required. The mandi does have a 3.5 acre cement godown, but the freezer isn't accessible to the traders due to high costs. In fact, most of the traders are not even aware of the availability of a freezer, even though it is located right next to the mandi. To them, 'freezing' means refrigerators, and the very idea of freezing vegetables in such large quantities seemed absurd. Others said that freezing vegetables won't help because they are sold in the open, and they get spoilt due to the exposure anyway.

Considering the global food crisis, one would be shocked to see the amount of produce that's wasted everyday. A considerable amount of the vegetables are regularly wasted because they don't get sold before they spoil. Many traders are forced to sell at a loss sometimes in order to sell the vegetables before they go bad. The freezer nearby is only used for storing ice cream and special products like imported fruits/vegetables. It has a number of chambers, and the users are required to pay a monthly rent depending on the amount of space used. The cost of using such a freezer is so high (Rs.15000 a month, on an average) that no trader can sell his goods profitably if he uses such facilities.

The traders said that they do not avail credit facilities from the banks to trade the volumes that an arhtiya does. Perhaps the risk of not being able to sell all the produce is a deterrent.

HOW OTHER MANDI'S WORK

LARGE MANDI'S

CASE STUDY: SAROJINI NAGAR

Most of the traders buy their produce from Azadpur mandi, although they go to Okhla mandi sometimes if the prices are more favourable or for certain commodities. At the larger mandis, the vegetables are sold by the dhadi or auctioned. Auctioning begins at four in the morning so the traders try to reach the mandi as early as possible. Most traders avoid auctions because each lot of vegetables has a mix of good and bad produce. Traders who do participate in auctions usually segregate the vegetables into good and bad and sell them at different rates.

Not every trader at Azadpur sells the commodity at the same price. There is also a lot of bargaining involved in the purchase of goods. The large traders transport their goods in trucks. The trucks charge per carton of produce to be transported. Smaller traders hire autos instead of trucks.

Then traders then add their margin to it to cover their costs – transport, rent of the shop and payment of helpers. Since they all sell in the same market, their costs are similar and so are the prices.

The traders don't necessarily sell the same vegetables every day. Neither do they buy the same commodities each time. They buy any vegetable that seems profitable. Vegetables that aren't sold on the same day are sold the next day at a lower price.

Smaller traders, who sell on handcarts or on the street, charge almost the same price as the larger traders, who have to factor the rent of the shop in their costs. According to the small traders, this is because the larger shops sell more items. They can reduce the price of one vegetable/fruit and make up for it by selling some other commodity at a higher price. But the small traders sell only one or two commodities, and they have to sell it at a profitable price. The small traders never buy from arhtiyas because the quality of the produce is not uniform. They prefer traders who sell at a fixed price.

Often, the prices are lower in the market at night because the traders try to sell all their leftover produce. Those who don't manage to sell all of it segregate their produce and sell the older goods at a lower price the next day.

Even juice shop owners go all the way to Azadpur to buy the fruits. While buying from other traders in Sarojini Nagar would offer them place utility, they feel they get a better price at Azadpur, and since they buy goods in bulk, it's more profitable for them to buy it directly from the mandi.

MEDIUM-SIZED MANDI'S

CASE STUDY: INA COLONY MARKET

Located between the Safdarjung flyover and the AIIMS flyover, INA market is arguably one of the most well-connected markets in Delhi. It's known to have a wide variety of fruits, vegetables and spices.

Most of the traders buy their produce from Azadpur. A few of them go to Okhla or Jahangirpur for certain products. They usually buy their goods by the carton (peti). The weight of the carton varies, but the prices are fixed according to the cartons, and even the trucks that transport the products charge according to the number of cartons. The prices offered by each trader showed slight variations, and they claimed that different costs and varying product quality were the cause. Some traders buy directly from the arhtiyas since it offers a higher margin for profit. But they felt that buying from an arhtiya is a bit of a gamble due to the variation in the quality. Many of them said they participate in auctions to buy the goods.

The larger traders hire a few shop assistants, who run the shop from 9 a.m. and to 11 p.m. The owners buy the products from Azadpur and have it transported to INA. Some of them hire shop assistants for bidding, buying and transporting the commodities as well and only supervise the functioning of the shop. They pay a rent for the shop premises to the Government, and go to Azadpur each morning on their bike or scooter. On an average, they buy Rs.15000-20000 worth of fruits and vegetables (about 250-300 kgs, according to one trader) and most of it is sold on the same day. If not, they claim the goods don't spoil for about a week so they continue to sell it. They go to Azadpur each day to buy more goods. Prices are fixed by adding the operating costs and profit margin to the cost price. Often, the determination of costs is not very easy because the produce is bought by the carton and sold by the kilo, and because some of the produce has to be discarded because it's spoilt. Also, due to the scope for bargaining in the market, the quoted price and the selling price are not always consistent.

Trading is more difficult for the smaller traders. They go to Azadpur only when a sizeable part of their goods are sold. Many of them sell seasonal fruits and usually buy any fruit that seems profitable. On an average, they go to Azadpur mandi three or four times a week. They don't need to go everyday because all their fruits aren't sold in a single day. Their costs are lower than those of larger traders – they go to the mandi in a bus and don't have to pay any rent because most of them sell their goods on a handcart. Since they work alone, they aren't required to pay any remuneration to anyone else out of the profits. And the price at which they sell is lower than that of the larger shops, though they usually quote the same price as the other traders at first. Often, they don't even cover costs. According to one trader, the produce at Azadpur is divided into quality grades – Grade 1, Grade 2 and Grade 3. When he has enough money to buy a higher quality product, he buys it. At other times he has to settle for lower quality goods.

The large traders usually don't sell bananas. One of the small banana sellers said bananas are sold in smaller local mandis and the traders ordinarily don't go to Azadpur to buy them. He had bought the bananas from Sewa Nagar at Rs.22 a dozen and was selling them at Rs.26. The prices fluctuate in Sewa Nagar depending on the demand for the goods. The bananas may cost Rs.22 a dozen early in the morning, but the price may increase to Rs.24 a dozen by the afternoon if the demand is high. One of the traders said he goes to the mandi early each morning and buys the bananas at the lowest possible price. Then he sorts the goods and sells them at differential prices to make a profit. He transports the goods on a cycle rickshaw to INA market, and returns to Sewa Nagar for more goods only when most of the goods have been sold or can't be sold because they are spoilt.

SMALL MANDI'S

CASE STUDY: LAXMI BAI NAGAR

How do very small traders who sell their goods in neighbourhood markets operate? In the case of the small vegetable shop in Laxmi Bai Nagar, selling vegetables is a family business – the husband and the son buy, move and arrange the vegetables while the wife and the daughter sell it. They buy 10-20 kgs of about 15 different fruits and vegetables everyday from Okhla mandi. According to the lady, Azadpur mandi is not economical for those who buy small quantities of vegetables. They do not participate in Daam Theek-Theek Lagao auctions because the quantity they buy is so small. It makes sense for them to stock an assortment of vegetables because theirs is the only vegetable shop in Laxmi Bai Nagar market.

They prefer buying bananas from Pillanji Gaon instead of Okhla because at Okhla, the buyer can't choose which bunch of bananas they want to buy, and even if some of the bananas in a bunch are spoiled, they aren't removed at the time of sale. The entire bunch is sold as a single unit and every banana has to be paid for.

Initially, they used to buy their goods at Azadpur. Although they made their purchase at 6 in the morning, the goods used to arrive at 3 in the afternoon because the truck would deliver their goods last, since the quantity was so small. The goods are delivered to the larger traders first. Now, they hire a matador from Okhla, or at times, a Maruti van, for which they pay Rs.200 per trip (it was Rs.150 per day before the fuel hike, they claim) per trader. They usually hire it for their goods alone. If the driver was to deliver to another seller as well (as he used to when there were two vegetable shops in Laxmi Bai Nagar market), he would charge the same amount from the other seller too.

They have to pay a monthly rent for the shop at the NDMC office. It costs Rs.2000 per stall per month. They use two stalls. A fine of 10% of the monthly rent is imposed for non-payment. In the past, they were served a court notice for non-payment of the entire fine amount and ended up paying Rs.1100 to settle the case instead of the Rs.50 that they were unable to pay at the time.

They have a 480-litre refrigerator that they use to store cottage cheese, green chillies, coriander leaves and mint. Other vegetables can't be stored in it, and the goods spoil anyway because they are exposed all day. Often all the goods aren't sold and they incur losses. They always stock essential vegetables like potatoes, onions and tomatoes. The choice of other vegetables and fruits depends on whether or not the prices are competitive enough to make a profit.

The shop is a natural monopoly. Other vegetable traders who tried to set shop there were unable to match the volumes of this family, and eventually vacated the premises because they were making losses and were unable to pay the rent. Two stalls next to theirs lie vacant. But when they tried to use them without paying the rent, they were vacated by Government officials.

They charge differential prices. For a customer from nearby slum clusters or for guards and dhobis, they charge lower prices because they know that these customers won't be able to afford higher prices. For customers they are well-acquainted with, they charge relatively low prices. For others they charge higher prices. When the goods aren't sold in a single day, they sell it the next day for a lower price and the new goods at a higher price (on an average, a difference of Rs.2 per kg).

More than the product itself, what makes their business work is the fact that they

provide place utility. INA market is across the road to Laxmi Bai Nagar, and Sarojini Nagar is about a kilometre away. Yet customers prefer buying at Laxmi Bai Nagar, even though the price charged is Rs.1-5 higher than the price at other markets. They also offer 'free home delivery' of vegetables. The son often delivers vegetables to customers who buy in relatively large quantities on his cycle, or if it's nearby, on foot. Some customers call the lady on her cell phone and order vegetables.

Prices are set by her desire for profits and the customers' willingness to pay. Of course their costs are relatively higher than that of traders in other markets because they don't have economies of scale. But the monopoly over the area gives them the freedom to charge a relatively high price.

CONCLUSION

The exchange of information within the mandi's seems to be relatively efficient, since almost every trader is aware of the prices in other parts of the market. The number of facilities available to the farmers and traders are certainly better than they were a decade ago. But the trading mechanism is still primitive. The spot markets are still largely unorganized in comparison with the futures markets.

Perhaps the greatest problem plaguing the spot markets today is the absence of a benchmark price. Perishable goods like fruits and vegetables have highly volatile prices. Cold storage is the most basic facility that needs to be made available to the traders to bring about greater price stability.

Despite adequate credit availability, the traders seem reluctant to use banking services. Most of the facilities offered in the mandi's are only used by large traders and farmers. The small traders are generally more risk-averse, and not as well-informed as the large ones.

The distribution channel is unnecessarily long and the transportation costs contribute significantly to commodity prices. According to an IIM-A study, the share the farmer receives of each rupee spent by the consumer is 48 per cent and 37 per cent for vegetables and fruits respectively, which signifies a great deal of inefficiency in the distribution chain and transport facilities. Better transportation facilities will help shorten the distribution channel, and hence lower the time and costs for consumers, and ensure higher returns for farmers. Retail chains have been successful in building such a model, but their scale of operation is still relatively low.

Consolidation of holdings by small farmers is essential to improve the process of improving agricultural efficiency. In the mandi's, auctioning could be a potent tool for price discovery if quality standards are set for the produce. Better awareness, better marketing and closer integration with the derivatives market would help develop the spot markets significantly. Building better shops and improving access to information systems would also help in waste minimization and bringing down price fluctuations respectively.

Lastly, although this has become a cliché now, the Government needs to invest heavily in improving the infrastructure for agriculture in order to ensure food security and balanced economic development.

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Remark: check positioning of footnote on pg 5, 6