

Food Price Transmission in India: The case of wheat

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It is no secret that Indian food prices are increasingly affected by international prices. Ever since 2002, when all quantitative restrictions on Indian imports of agricultural commodities were lifted as part of India's WTO commitments, this tendency has become even more pronounced. Even when the actual volume of imports or exports is relatively low, the mere possibility (or threat) of such flows can be sufficient to affect domestic market prices.

This has tended to provide a convenient excuse for domestic policy makers to throw up their hands and claim that there is little they can do to prevent increases in the domestic market prices of essential food items, because of the impact of international trends. However, the extent to which global trends affect domestic prices is not a given, because there is a fairly large set of policy instruments that are still available with the government. This is why the extent of transmission of global prices varies from country to country, with some developing countries much better able to manage the impact of rising global prices.

In the Indian case, this ability to affect domestic prices should be particularly evident in the case of commodities that are subject to public procurement and distribution, such as rice and wheat. In the case of such food grains, various domestic strategies such as the amount of public procurement and distribution, the amount withheld from the market in the form of public buffer stocks, the quantum of the food subsidy can all affect the price. Further, even the international trade regime is still subject to some government policies, particularly as reflected in imports and temporary bans on exports, which also affect prices.

It is worth examining the extent of global price transmission on domestic prices by focusing on a particular crop, so we take up the case of wheat. This is not only because it is one of the two most important food grains consumed in India, but because this is a commodity whose price has been subject to massive price volatility in global markets over the past five years.

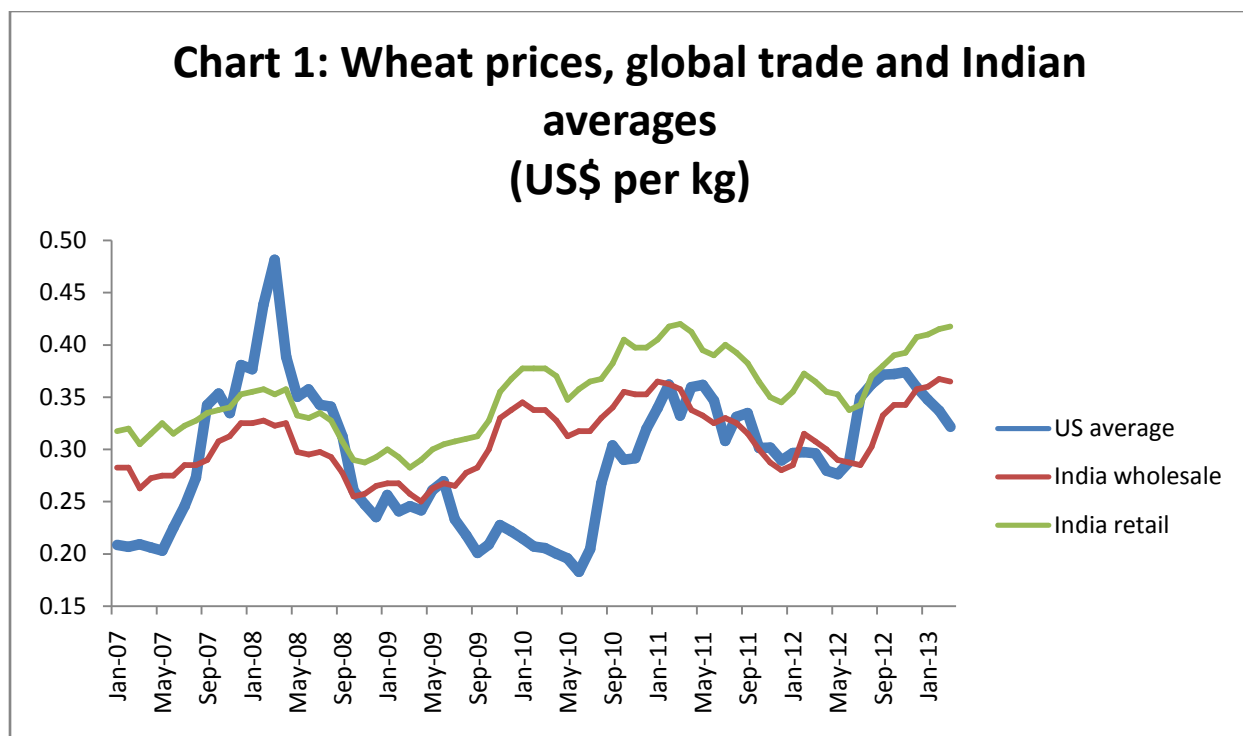


Chart 1 shows the monthly movement of global wheat prices in relation to the Indian wholesale and retail prices of wheat. The proxy for the global price is the simple average of US hard red winter wheat and US soft red winter wheat prices. The Indian wholesale and retail prices are the simple average of prices in Delhi, Mumbai, Patna and Chennai. For convenience of comparison, all prices are expressed in US dollars per kilogramme. (All the data in this and other charts are from the FAO's GIEWS database.)

There are several striking features evident from this chart. In general both wholesale and retail prices in India have been ruling above (sometimes substantially above) the global price, which is already something of a surprise given the much lower per capita income prevailing in India.

This was a period of really marked volatility in global wheat prices, which more than doubled in the 18 months after January 2007, then came down to their earlier level, then rose again, and have been generally fluctuating around a rising trend thereafter. Overall, Indian prices tended to move along with these. However, there was one period of significant exception: when global wheat prices collapsed from July 2009 to June 2010. In this period, Indian prices first fell slightly, but then started rising again, from May 2009 and thereafter for the next year there was a sharp divergence in the trends of global and domestic prices. It is only since around May 2011 that the two sets of prices appeared to converge once again in terms of their movements.

In other words, Indian prices have moved more or less along with global prices when they are rising, which suggests a high rate of price transmission from global markets. But when global prices have fallen sharply, as they did from January 2009 to June 2010, no such transmission has been evident.

This conclusion is confirmed by the data in Table 1, which provides the correlation coefficients between global (US) wheat prices and Indian whole prices in different period. While the entire period shows a relatively weak but positive correlation, the periods of rising prices (January 2007 to June 2008 as well as January 2011 to December 2012) show much higher positive correlation, while the period of falling global prices (January 2009 to June 2010) shows a fairly high negative correlation.

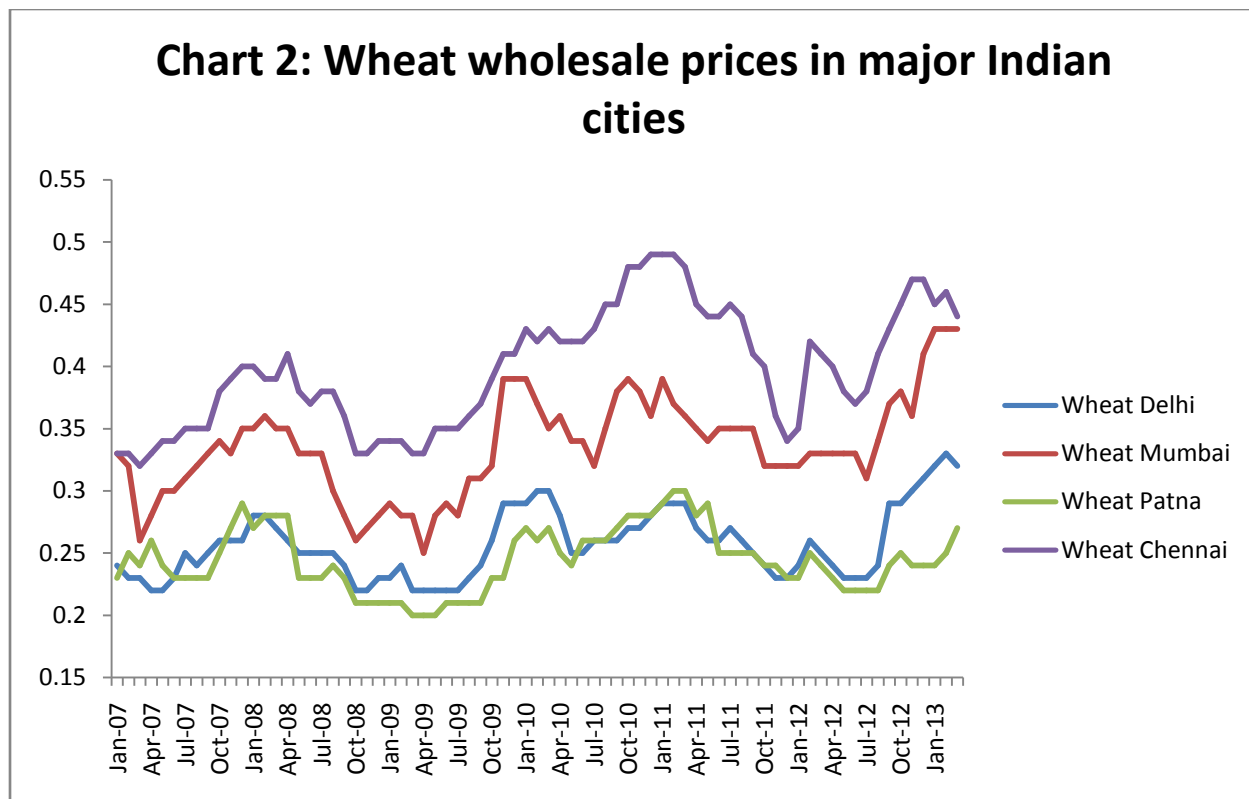
Table 1: Correlation coefficients between monthly US wheat prices and Indian wholesale wheat prices

Entire period Jan 07 to Mar 13	0.42
Jan 07 to Dec 08	0.85
Jan 09 to Jun 10	-0.68
Jul 10 to Mar 13	0.38
Jan 11 to Dec 12	0.67

What explains this peculiar pattern? Analysts tend to put the blame for higher prices in India in the period of falling global prices on domestic factors, in particular the failure of the monsoon in 2009, which created both anticipatory and actual upward pressures on domestic prices. It is certainly true that wheat production over the rabi harvest of 2009-10 was poor, barely increasing at all from the total production of the previous year.

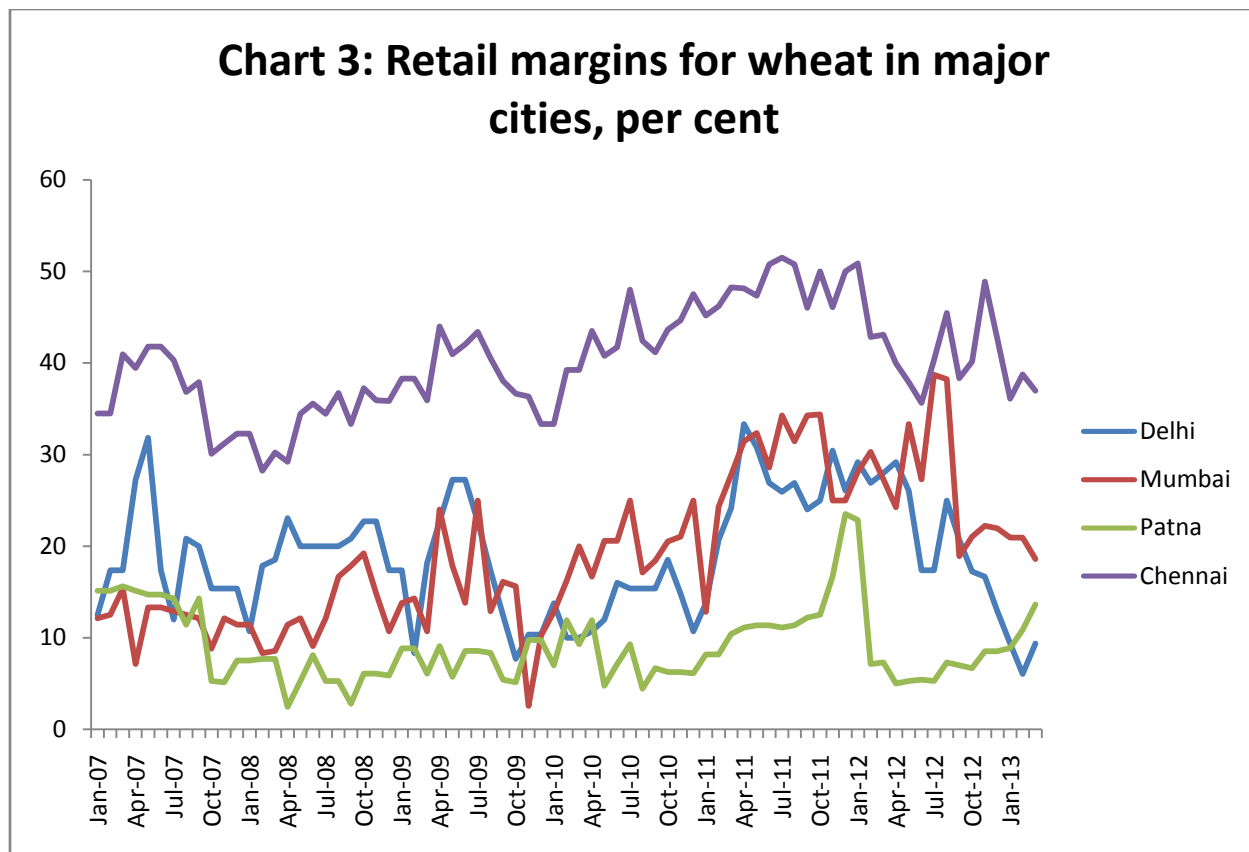
However, it should also be noted that the effective import duty on wheat is zero, so presumably if there were concerns about domestic supply shortfalls, these could have been covered by imports (that too, in a period of falling global prices that would have entailed cheaper imports). In general this points to a failure of the aggregate food management strategy of the central government, which handles such matters.

It also highlights a concern with the central government's attempt to pass the buck of higher food prices on to external forces. Clearly, the government cannot have it both ways. If higher global prices are necessarily supposed to cause increases in domestic prices (irrespective of domestic supply conditions and other policies like export bans and so on) then presumably periods of falling prices should also be reflected in domestic prices because of the role of imports etc. Indeed it has been found that several other countries such as China have exhibited much greater stability in wheat prices despite the global volatility precisely because of more effective aggregate domestic food management strategies.



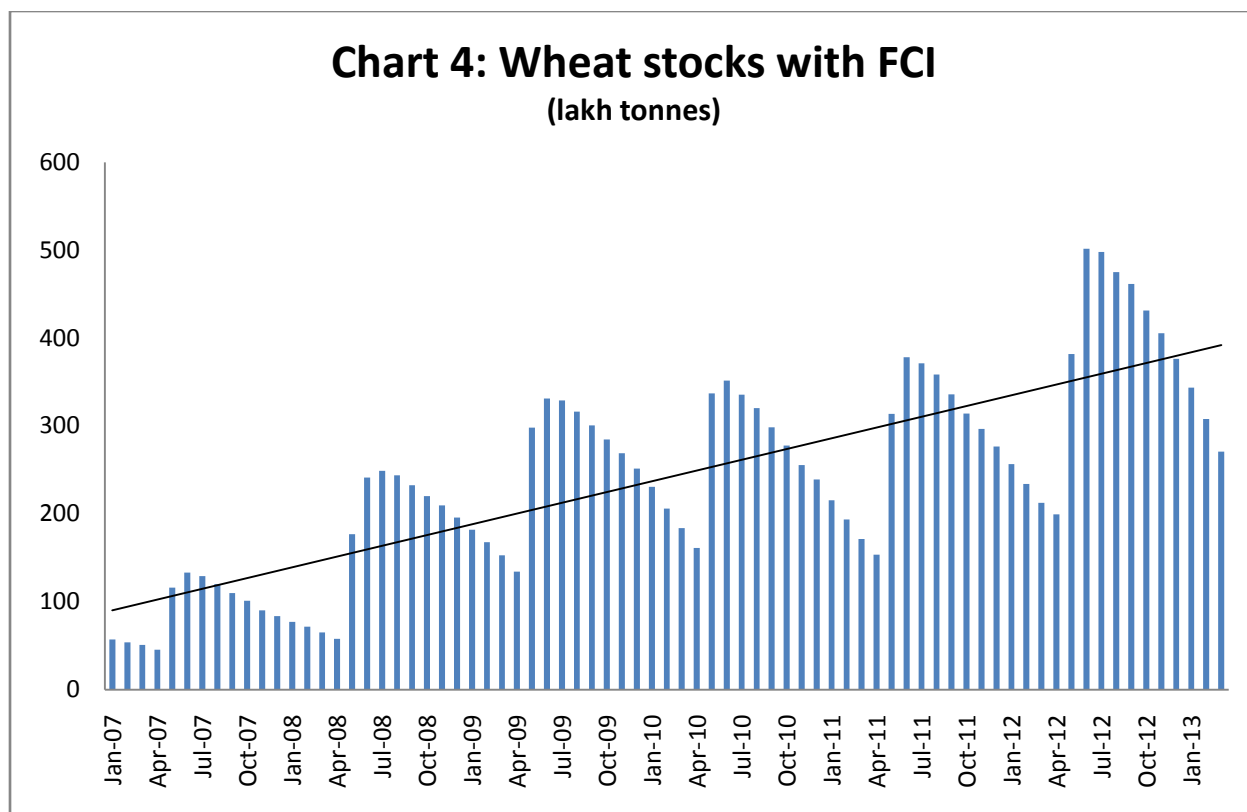
As is well known, there is huge divergence in food prices across major mandis and locations in the country. Chart 2 captures some of this by tracking movements in the wholesale price of wheat in four major cities: Delhi, Mumbai, Patna and Chennai. While the northern cities of Delhi and Patna show broadly similar trends in wheat wholesale prices, Mumbai and Chennai exhibit both higher absolute levels and slightly different short term movements.

Similarly, even the differences between wholesale and retail prices of wheat (the retail marketing margins) vary dramatically across these cities, as indicated in Chart 3. Once again Chennai shows the higher level, but in all the cities the short term movements show little correlation. One reason for the higher retail margins in Chennai may be that wheat is not as popular a staple in household consumption and is used dominantly in baking products, but this obviously needs to be verified. While the reasons for such tendencies deserve to be explored in much greater detail, and in general this suggests the absence of a national market.



One of the features of the very recent past, which is hinted at in Chart 1, is that once again as global wheat prices are falling, Indian prices continue to rise. Once again domestic factors are held responsible. This time, however, the vagaries of the weather gods cannot be blamed. Rather, the more likely proximate cause is not just home-grown but entirely policy-driven: the market operations of the Food Corporation of India, which has been significantly increasing its holding of buffer stocks of wheat. Since this amounts to a withdrawal from the domestic market, this obviously has an impact on both wholesale and retail prices.

Chart 4 describes the holding of buffer stock of wheat. (Incidentally, rice stock with the FCI also show a similar trend of increase). For obvious reasons, the level of wheat stocks with the FCI tends to be highly seasonal, with stocks being at their lowest in April just before the rabi procurement season and their highest in July after procurement is complete and before offtake by the public distribution system and other uses of the grain. But the pattern of recent years has been remarkable because of the continuing increase each year in procurement, accompanied by insufficient increases in distribution, despite continuously increasing domestic prices at both wholesale and retail levels.



As a result, even at their current low before the harvest procurement, wheat stocks with the FCI are now more than double the level of the post-harvest procurement of July 2007. Levels of stocks for the past couple of years have been several multiples of the declared buffer stock norms of the FCI. This continued holding of such large stocks is inexplicable. Further, it adds significantly to the food subsidy cost of the government simply because of the cost of holding these, which is both wasteful and expensive.

This suggests that this time around, the central government is not just guilty of errors of omission; it is not just complicit in externally driven unfavourable trends. This time, since the global prices are heading downwards even as Indian prices continue to increase, the Government of India is actually directly responsible for the increased prices of wheat that are adversely affecting so many millions of Indian consumers and dramatically adding to their food insecurity.

*** This article was originally published in the Business Line, April 29, 2013.**