Deepak Mohanty: Why is recent food inflation in India so persistent?

Speech by Mr Deepak Mohanty, Executive Director of the Reserve Bank of India, at the Annual Lalit Doshi Memorial Lecture, Xavier's Chapter, delivered at the St. Xavier's College, Mumbai, 13 January 2014.

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It is an honour for me to deliver this year's Annual Lalit Doshi Memorial Lecture. I thank Principal Dr. Fr. Frazer Mascarenhas, Dr. Aditi Sawant and Ms. Nikita Kohli for this opportunity. The St. Xavier's College has the distinction of producing many leaders and intellectuals, and Lalit Doshi was a giant among them. He was an accomplished economic administrator and thinker. He made immense policy contributions to aid the industrial progress in our country, and in particular Maharashtra.

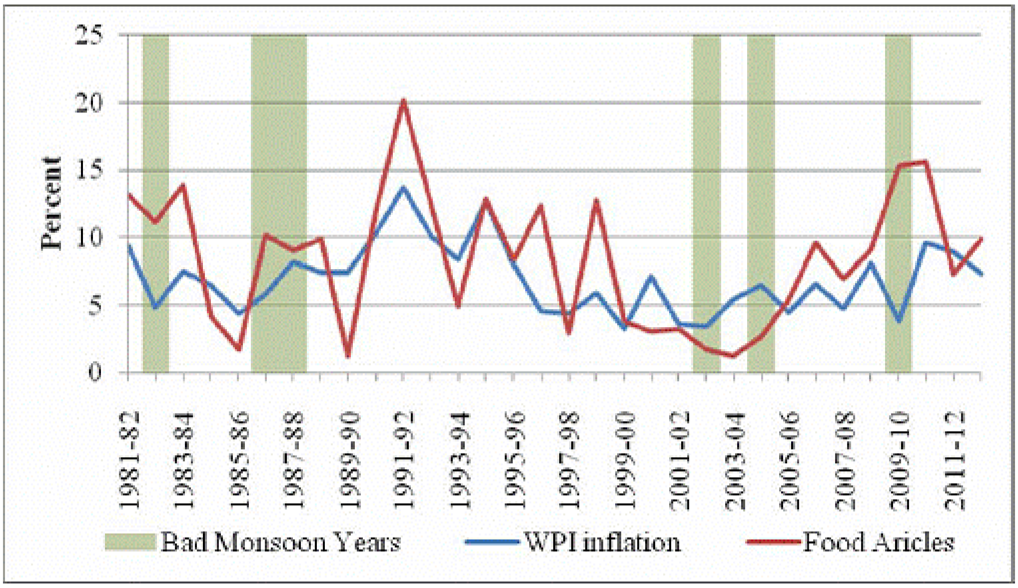
As students of economics I do not have to tell you that the central objective of a central bank is price stability. Central banks strive to achieve a low and stable inflation rate in order to sustain a high level of growth and maximise social welfare. In the last decade we experienced a period of high growth and low inflation until the global financial crisis in 2008. The crisis adversely impacted the Indian economy given our increasing integration with the global economy. The Government and the Reserve Bank of India (RBI) took several policy measures to minimise the spillover of global crisis on our economy. In the process growth bounced back but inflation also increased. More recently while growth has moderated, inflation still remains above our comfort levels. In the post-global crisis period since 2008–09 inflation has emerged as a major public policy concern. A disturbing feature of the current episode of inflation is that it has been accompanied by high food inflation, which hurts most the poor and the low-income strata of our society.

Against this background, I propose to take this opportunity to talk to you about food inflation. I will trace food inflation over the years, analyse the determinants of food inflation both from the supply and demand sides, reflect on the role of monetary policy and conclude with some thoughts on the way forward to address food inflation.

Over the years we have seen that the share of agriculture and allied sector, generally representing the food producing sector, in our gross domestic product (GDP) has come down significantly: from around 25 per cent in the mid-1990s to around 14 per cent now. However, food currently accounts for over one-third of our wholesale price index (WPI) and over one-half of our consumer price index (CPI). Since the food economy is essentially dependent on domestic production, fluctuation in agricultural production has a direct bearing on output and inflation. It is important, however, to note that the adverse impact of a fall in agricultural output is significantly less on GDP than on inflation because of still a very high weightage of food in our price indices.

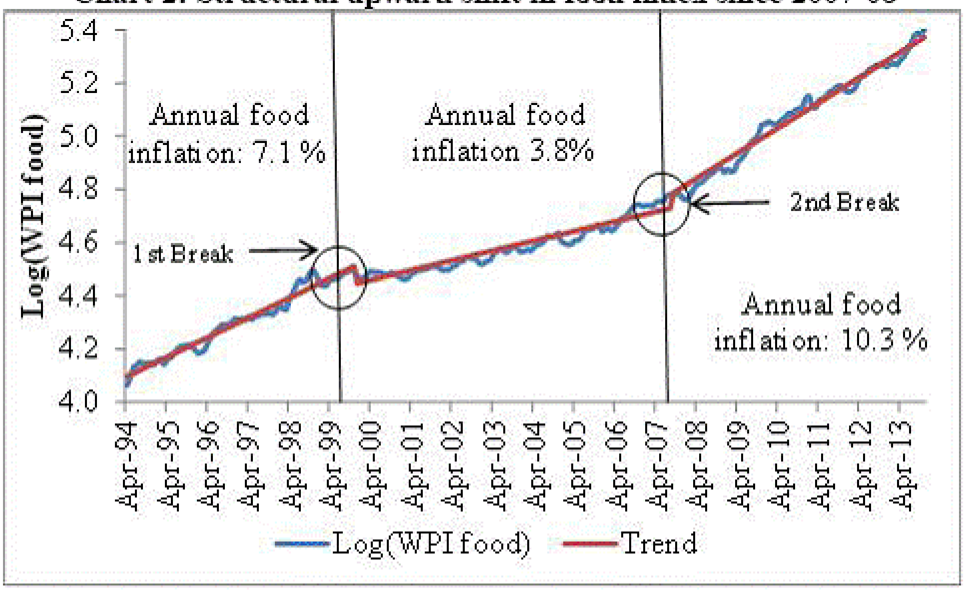
As you know, weather plays an important part in agricultural production. We have seen this over the years that the volume and spatial distribution of monsoon rains have a significant impact on agricultural production and hence food inflation (Chart 1). But can deficient monsoon satisfactorily explain the recent trend in food inflation? Let me turn to this issue in a little more detail.

Chart 1: Deficient rainfall generally pushes up food prices



If we look closely at food price index for a longer period, we could notice two structural breaks, one at the beginning of financial year 2000–01 and the other in the middle of 2007–08 (Chart 2)[1].

Chart 2: Structural upward shift in food index since 2007-08



It is interesting to see that average food inflation declined to 3.8 percent per annum during the 8-year period 2000–08 from 7.1 percent per annum in the second half of the 1990s despite higher GDP growth of 7.2 per cent per annum as against 6.7 per cent in the

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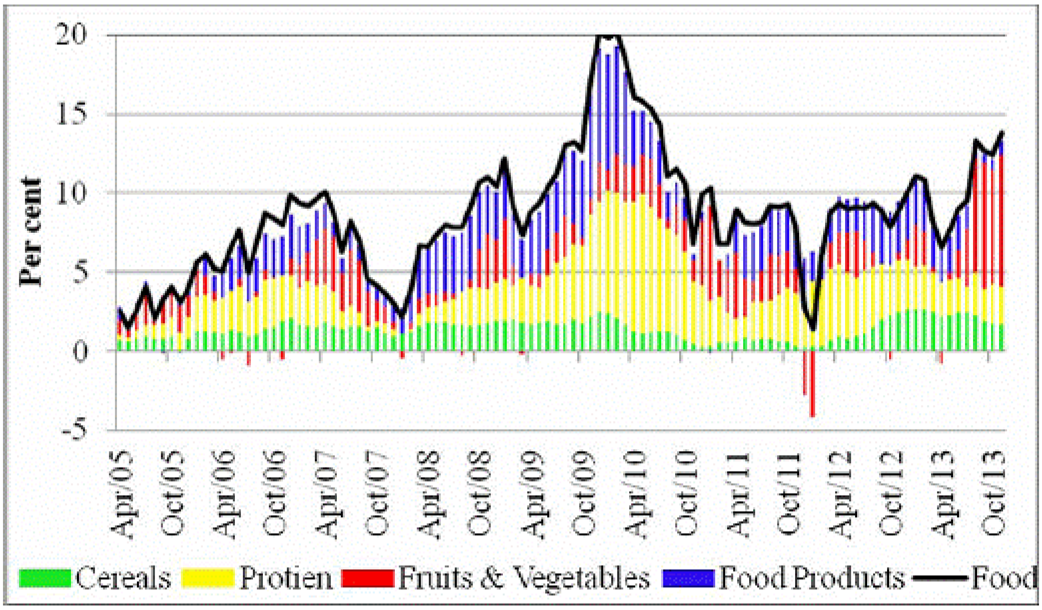
1 Estimated trend based on Bai-Peron methodology covering monthly WPI data for the period 1994: April to 2013:November.

preceding period. The period 2000–08 experienced two years of deficient monsoon in 2002–03 and 2004–05, in spite of that food inflation remained contained suggesting in a way that the impact of monsoon on food inflation has waned. In the subsequent 5-year period, 2008–09 to 2013–14 so far, not only that the average food inflation rose sharply to 10.3 per cent per annum, it has remained persistent. Arguably the trigger for high food inflation emanated from the drought of 2009–10. But good rains in the following years have failed to douse food inflation. There are several other explanations such as that global food prices also rose and our exchange rate depreciated which exacerbated domestic food inflation. But subsequent moderation in global food prices has not dampened our food inflation. Of course food inflation has come off its peak, but its persistence around double digit level suggests that that there must be some thing more fundamental at play. Let us look at food inflation data at a more disaggregated level.

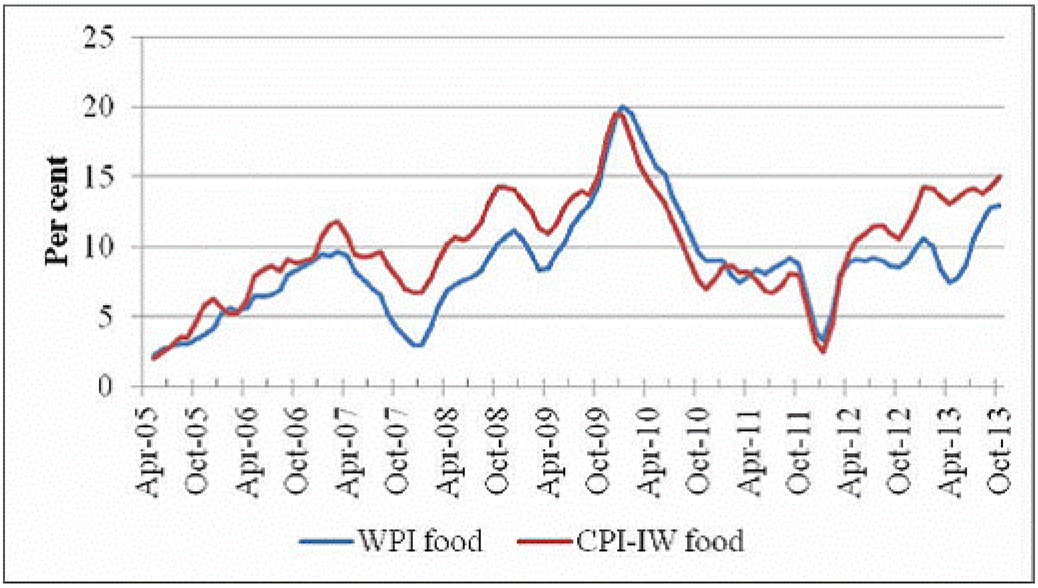
In the more recent period, the components of food inflation seem to have changed. Although cereal inflation has risen, it is mostly protein items as well as fruits and vegetables that have driven the overall food inflation at the wholesale level (Chart 3).

Chart 3: Major contributors of food inflation



At the retail level food inflation has been even higher. Though food inflations at the wholesale and consumer levels tend to move together, consumer food inflation rises faster during an uptrend, accentuating the divergence between WPI and CPI (Chart 4). The recent changes in the drivers of food inflation could partly explain the divergence: the retail margins tend to be higher in the case of perishables such as fruits and vegetables.

Chart 4: Food inflation wholesale and consumer price baskets
(YoY on 3 month moving average – Per cent)



The household consumption expenditure surveys made available by the National Sample Survey Office (NSSO) show that the composition of food expenditure has changed in more recent years. As income levels rise, it is natural to expect that the share of income spent on food falls. Even within this reduced share, there has been a significant increase in real expenditure on protein and vegetables in rural and urban areas across income deciles. Data for the years 1993–2012 suggest that it is only in the second half of the 2000s that annual average real expenditure turned mildly positive. But, thereafter, during 2010–12, the real average per capita expenditure has remained significantly positive. Moreover, there is greater allocation of expenditure away from cereals towards other forms of food items such as protein and vegetables (Table). Hence, demand seems to be one of the factors driving the prices of protein and vegetables.

Table: Average annual growth in real[@] household monthly per capita expenditure

Group/Sub-groups	1993-2000		2000-05		2005-10		2010-12	
	R	U	R	U	R	U	R	U
Cereals	-0.6	0.0	-2.6	-2.4	-1.7	-0.8	-4.2	-3.6
Protein[#]	0.1	0.4	0.2	-1.1	2.4	1.8	9.2	5.6
Fruits & vegetables	1.3	0.8	1.7	-0.8	0.6	0.3	2.2	1.5
Other food*	-0.5	-0.9	2.6	0.9	1.3	-0.1	8.5	9.6
Food	-0.1	0.0	0.0	-0.8	0.6	0.4	4.2	4.2

R: Rural; U:Urban

@ rural is deflated using CPI-AL (food) 1993-94=100 and Urban is deflated using CPI-IW (food) 1993-94=100;

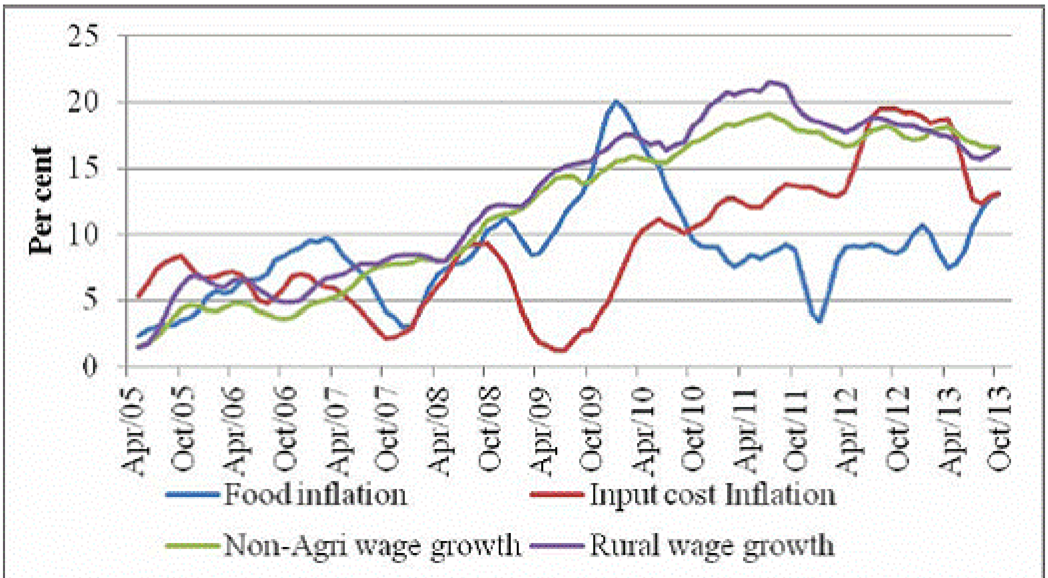
#pulses, milk, egg, meat and fish

*Edible oils, beverages, sugar, salt and spices

Another factor is the cost of cultivation. The prices of various inputs have gone up. The cost of fuel and fertilisers has gone up because of high international oil prices combined with exchange rate depreciation. The dominant part of the cost of cultivation is labour. This is particularly so in our set up with the preponderance of small holdings, which are less amenable to mechanisation. Agricultural wages have shown a sustained increase since the mid-2000s. Even after accounting for inflation, real wage increase has been significantly positive. Non-agricultural wages too have shown similar increases in rural areas.

There are several explanations why rural wages have increased. One explanation is that socially inclusive public policy such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has set a floor to rural wages and increased the bargaining power of the work force. It is not to argue that rural wage increase is not desirable as real wages remained stagnant for quite some time. Admittedly, when GDP was rising faster, real wage increase could be somewhat benign, but real wage increase continued to remain significant even as GDP growth decelerated. Thus the wage catch up period seems to have overshot economic growth cycle (Chart 5).

Chart 5: Input cost and food inflation (Per cent)



Note: Series is smoothed using 3 month moving average.
Input cost includes that of electricity, fertiliser & pesticide, diesel and agricultural wages

As students of economics you know very well that the increase in wages if not commensurate with productivity gains could be inflationary. Our food economy experienced a cost shock, which was reinforced by sustained wage increases buttressing demand. As supply did not increase commensurately, prices rose at a more than desirable level. While stylised facts may point towards the above conjecture, as economists you could test this formally in different ways. I attempted a simple structural vector auto regression (SVAR) of three variables of food price, material input price and rural wages with rainfall as an exogenous control variable.[2] The results show that material input cost has a sharp positive

[2] Estimated with monthly data from 1994: April to 2013: November; material cost includes prices of electricity, fertiliser & pesticide, and diesel.

impact on food inflation. Similarly wages have a significant positive impact. However, the impact of wages is gradual, but more persistent than material cost. Now let me turn to the role of monetary policy.

How should monetary policy respond to food inflation? From textbooks we learn that monetary policy should look through supply shocks such as a food price increase. But from experience we know that if the supply shock is persistent and becomes structural it will be a mistake for policy not to respond to it. For example, many central banks accommodated the oil price shock of the 1970s judging it to be a temporary supply shock. This was a major factor in subsequent worldwide inflation. The actual policy decision, however, may not be as simple and straightforward as that.

Another layer of complexity is added to this process by the state of inflation expectations in the economy. If inflation expectations are low and well anchored, the inflationary impact of a supply shock may turn out to be transitory; this is because wages normally do not react to such inflation. However, if inflation expectations are high and not so well anchored even a temporary supply shock could have an adverse impact on expectations and hence the medium-term inflation outcome.

We have seen it recently. As the global economy recovered from recession in 2009, commodity prices, particularly food and oil prices rebounded raising headline inflation in many countries. However, headline inflation soon moderated in many advanced economies, as inflation expectations remained well anchored, besides significant negative output gap. Of course it is difficult to measure and interpret inflation expectations in a developing country like ours. However, the RBI's quarterly household inflation expectations surveys conducted in select urban centres suggest that inflation expectations in India have remained elevated in double digits for quite some time now.[3] The broad consensus in policy analysis is that while one could look through the first round direct impact of supply shock induced inflation, policy should respond to the second round effects so that the inflation process does not get generalised. "…the direct role of monetary policy in combating food price pressures is limited, but in the face of sustained high food inflation, monetary action may still be warranted to anchor inflation expectations."[4]

To sum up, the nature and composition of food inflation has changed in the recent years. As per capita income has increased the demand for food has shifted towards protein, fruits and vegetables. As supply response has not been adequate, there have been price pressures. In addition, the agricultural sector experienced cost-push both in terms of increasing price of material inputs and labour.

Let me conclude with some thoughts on the way forward so that the food economy does not pose a major constraint on the path of non-inflationary growth that could be sustained over the medium- to long-term.

First, there is substantial wastage of agricultural produce, particularly perishables like fruits and vegetables which needs to be minimised by improving the supply chain logistics by setting up cold chains and processing facility at producing clusters.

Second, there is a need to further liberalise agricultural trade by modifying agricultural produce marketing committee (APMC) Acts by state governments and even exempting perishables like fruits and vegetables from the provisions of APMC to give wider access to both producers and traders for better price discovery.

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3 Please see http://www.rbi.org.in/scripts/PublicationsView.aspx?id=15423 for the latest results of the Inflation Expectation Survey of Households.

4 Subbarao, D., (2011), "The Challenges of Food Inflation", Presidential Address at the Annual Conference of the Indian Society of Agricultural Marketing at Hyderabad, November 22.

Third, over the medium term supply can be improved in a non-inflationary manner by augmenting productivity. One important way of productivity expansion is through greater mechanisation. However, dominance of small size of land holdings puts a constraint on the choice of technology. Hence contract farming and leasing of farmland while protecting the ownership rights of small landholders should be facilitated to enhance production and productivity.

Fourth, from the demand side dispensation of social welfare benefits through cash transfer would help not only in rationalising demand for food products but also in containing the distortionary effect on the labour market resulting in a more economic use of the labour supply.

Finally, while the major policy actions to augment food supply may not be in the domain of monetary policy, it may have to perform a careful balancing act so that a sharp action does not choke off supply response and a weak response hardens inflationary expectations.

Thank you once again for your kind attention and for inviting me to deliver this prestigious lecture which has been a privilege.