

## Deepak Mohanty: Inflation dynamics in India – issues and concerns

Speech by Mr Deepak Mohanty, Executive Director of the Reserve Bank of India, to the Bombay Chamber of Commerce and Industry, Mumbai, 4 March 2010.

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I thank the Bombay Chamber of Commerce and Industry for giving me this opportunity to speak on inflation which is of immediate concern for our economy. I will begin with the trends in inflation, then briefly touch upon the costs of inflation, followed by an analysis of current inflation dynamics. I will conclude by flagging the areas of policy concern.

### Trends in inflation

There are expectations that the high levels of slack in resource utilisation and stable inflation expectations will contain global inflationary pressures in 2010<sup>1</sup>. The IMF projected the headline inflation in advanced economies at 1.3 per cent in 2010 and in emerging and developing economies at 6.2 per cent. In divergence with the global trend, India has witnessed a sharp increase in WPI inflation from a negative terrain during June–August 2009 to 9.9 per cent by February 2010. The increase in consumer prices are even higher in the range of 14.9–16.9 per cent (Table 1).

**Table 1: Inflation Rates for Different Commodity Groups**

(per cent)

Wholesale Price Index (WPI)	Year-on-Year Inflation Rate	
	February 2009	February 2010
WPI - All Commodities	3.5	9.9
WPI - Primary Articles	6.9	15.5
WPI - Food Articles	9.4	17.8
WPI - Fuel Group	-3.4	10.2
WPI - Manufactured Products	4.8	7.4
WPI - Manufactured Food Products	9.3	20.4
WPI – excl. Food Articles and Food Products	1.5	6.5
WPI – Manufacturing Products excl. Food Products	3.8	4.3
WPI – Essential Commodities *	10.5	21.6
Consumer Price Indices (CPIs)	February 2009	February 2010
CPI - Industrial Workers	9.6	14.9
CPI - Agricultural Labourers	10.8	16.5
CPI - Rural Labourers	10.8	16.5
CPI - Urban Non-manual Employees #	10.4	16.9
# Pertains to January. * Essential commodities in WPI basket include rice, wheat, jowar, bajra, pulses, potatoes, onions, milk, fish-inland, mutton, chillies (dry), tea, coking coal, kerosene, atta, sugar, gur, salt, hydrogenated vanaspati, rape & mustard oil, coconut oil, groundnut oil, long cloth/sheeting, dhoties, sarees & voiles, household laundry soap and safety matches.		

<sup>1</sup> January 2010 update of the World Economic Outlook, International Monetary Fund (IMF).

While there is this issue of divergence between wholesale price and consumer price based inflation measures, I do not propose to delve into that in this lecture<sup>2</sup>. I will, however, make two points. First, though the inflation indices have shown divergence in the past, the annual inflation based on the wholesale price index (WPI), consumer price index for industrial workers (CPI-IW), gross domestic product (GDP) deflator, and private final consumption expenditure (PFCE) deflator have, on an average, followed a similar path over long time spans (Table 2). Second, the current divergence could largely be attributed to different weightage of food in WPI and CPIs.

**Table 2: Inflation in India: Medium to Long-term**

(per cent)

Decades	WPI	CPI-IW	GDP Deflator	PFCE Deflator
1951-52 to 1960-61	1.9	2.1	1.6	1.6
1961-62 to 1970-71	6.2	6.5	6.2	6.3
1971-72 to 1980-81	10.3	8.3	8.8	8.4
1981-82 to 1990-91	7.1	9.0	8.7	8.3
1991-92 to 2000-01	7.8	8.7	8.1	8.5
2001-02 to 2008-09	5.2	5.3	4.6	4.4
Long-term Trend 1971-72 to 2008-09 (Longer term 1951-52 to 2008-09)	7.7 (6.4)	8.0 (6.7)	7.7 (6.3)	7.6 (6.3)

### Costs of inflation

It is, however, important to recognise that by any measure the current inflation rate in India is high. Why is inflation a concern? It is a cause of concern for public policy because of the associated costs, especially when a large part of the population has no hedge against inflation.

- First, inflation erodes the purchasing power of money. Fixed-income earners and pensioners see a decline in their disposable income and standard of living.
- Second, there is diminution of real value of savings as real interest rates turn negative and return on savings does not fully compensate for price rise.
- Third, economic agents base their consumption and investment decisions on their current and expected future income as well as their expectations on future inflation rates. Persistent high inflation alters inflationary expectations and apprehension arising from price uncertainty does lead to cut in spending by individuals and slowdown in investment by corporates which hurts economic growth in the long run.
- Fourth, if the inflation rate is increasing faster than those in other countries then domestic products become less competitive which has adverse impact on growth, employment and the balance of payments.
- Fifth, high inflation worsens inequality due to arbitrary redistribution of income where the poor suffer the most as the rich can hedge against inflation.

<sup>2</sup> For a detailed analysis of this, please see Deepak Mohanty (2010): "Measures of Inflation in India: Issues and Perspectives", speech delivered at the Conference of Indian Association for Research in National Income and Wealth at the Centre for Development Studies (CDS), Thiruvanthapuram, on January 9.

- Finally, the policy measures for reducing inflation have their externalities and associated costs in terms of reduction in aggregate demand in the short to medium run.

### **Inflation dynamics**

Milton Friedman famously said, “inflation is always and everywhere a monetary phenomenon”.<sup>3</sup> It is believed that short-run inflation dynamics is largely dependent on supply-demand conditions and monetary expansion influences inflationary condition in the long-run. Monetary expansion could be caused by persistence of high fiscal deficit and the need to finance the same by monetisation. Consequently, high monetary growth could lead to continued excess demand for a prolonged period without matching increase in output and productivity. On the other hand, supply conditions have strong influence on the inflation dynamics in the short run.

In a rapidly growing developing economy like ours, both structural and idiosyncratic factors could play a significant role in the determination of inflation. In the recent years, the inward looking nature of Indian economy has been changing. Activities in almost all the sectors in varying degrees are influenced by global factors, be it trade in commodities, provision of services, financing conditions, or consumer taste. Now domestic prices are more influenced by changes in global commodity prices for a wide range of goods – a sea change from the 1970s and 1980s when crude prices were major global influencing factors.

Taking into account the influence of global and domestic factors, the overall WPI basket can be divided into four commodity groups which have differential behaviour (Chart 1).

- First, *food items excluding oilseed products (weight in WPI: 24.2 per cent)*: Prices of this group of commodities are largely determined by domestic factors and, in the event of supply shortage, imports influences international prices too.
- Second, *oilseeds and products (weight in WPI: 6.8 per cent)*: This relatively small commodity group has often induced sudden surge in headline WPI as there is a structural shortage and nearly a third of domestic consumption of edible oils is met from imports.
- Third, *mineral oils and metals (weight in WPI: 15.3 per cent)*: Prices of this group of commodities are largely determined by international prices and the volatility in headline WPI inflation in recent years can largely be attributed to fluctuations in the international prices.
- Fourth, *other commodities (weight in WPI: 53.7 per cent)*: These remaining commodities, largely manufactured products, constitute more than half of the WPI basket and their prices have been more stable than the other three groups.

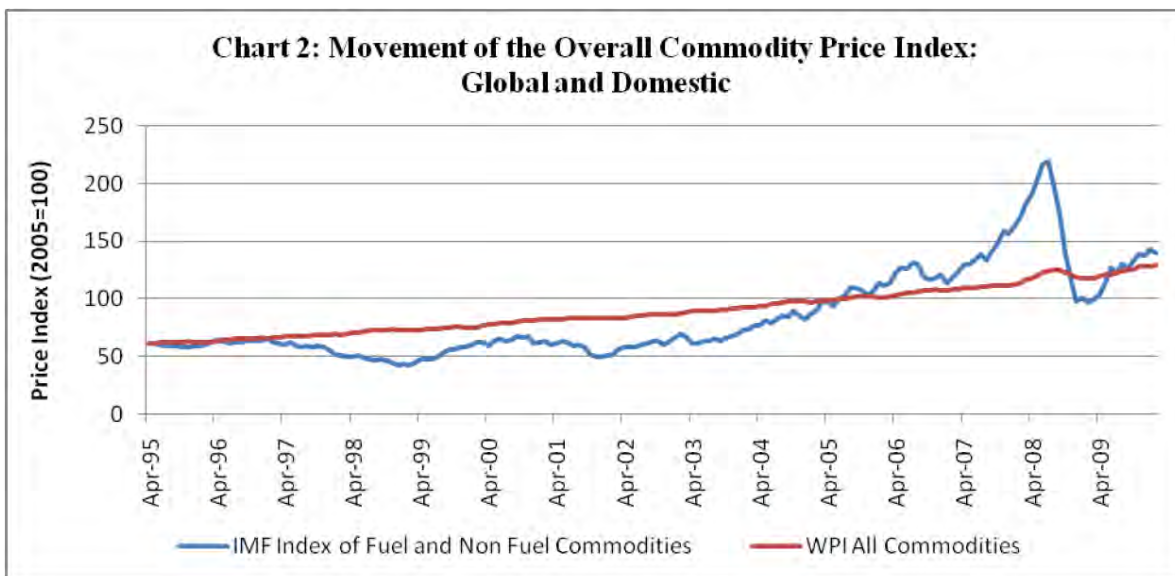
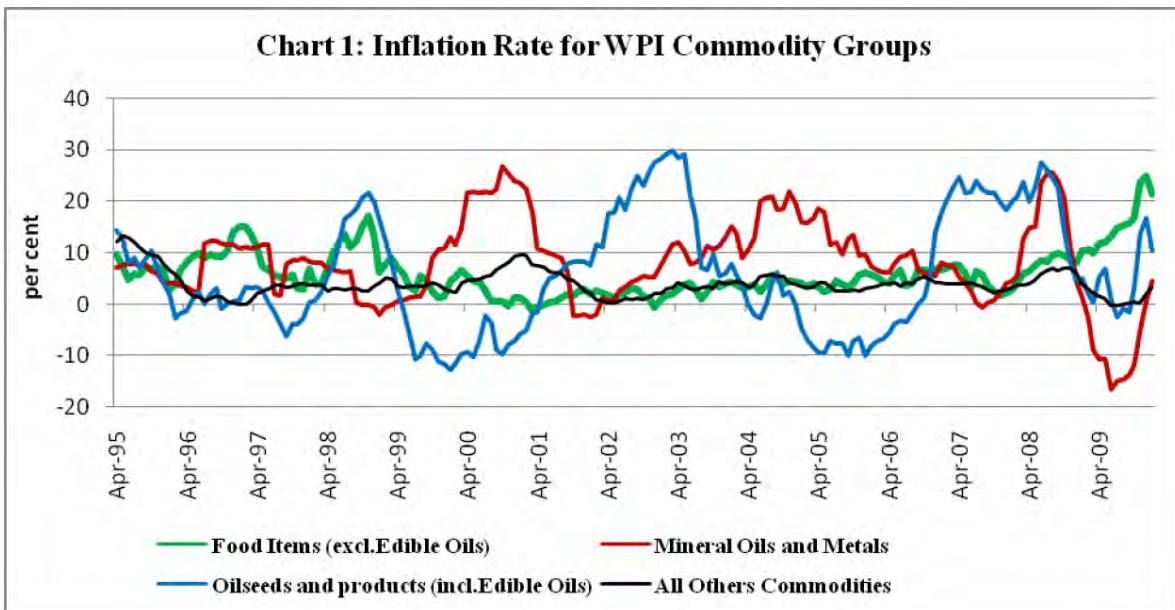
Empirical evidence suggests that among the above four groups, there is transmission of prices from *mineral oils and metals* to the *other commodities* group within a quarter. The full transmissions of *food prices* to *other commodities* takes longer, almost a year.

A comparison of domestic and global commodity price movement reveal the following. First, the direction of price movements has been similar, but the overall global commodity price movements have been more volatile, with a pronounced spike in 2007 and 2008 (Chart 2). Second, the increase in metal prices have been closely followed the global prices. Third, domestic prices of petroleum products have been less volatile than the corresponding international prices reflecting administered prices in this group. Fourth, increase in domestic

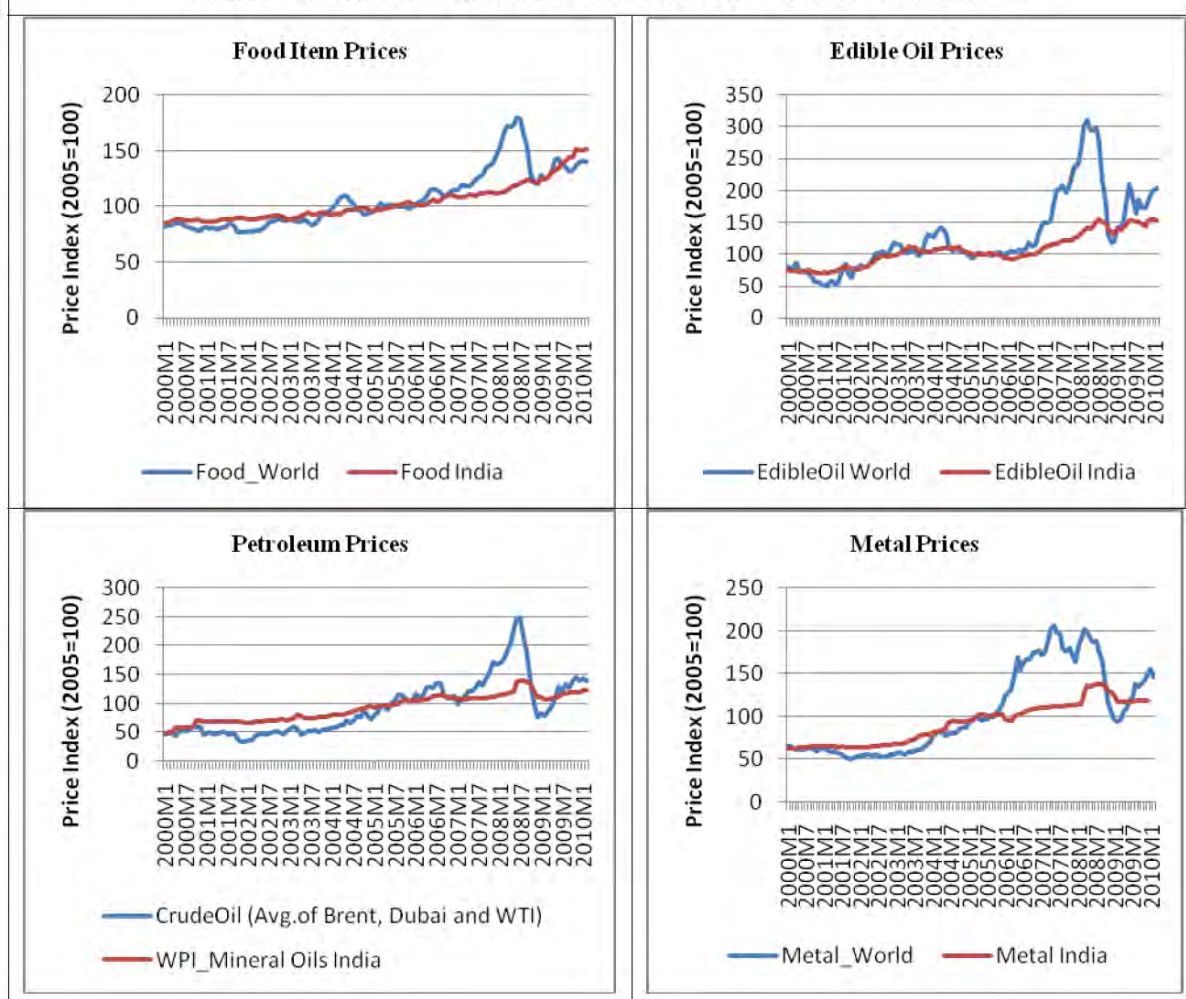
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<sup>3</sup> Milton Friedman (1963): *Inflation: Causes and Consequences*, Asia Publishing House, New York.

food prices, excepting the global spike in 2007 and 2008 has been higher reflecting structural and domestic factors (Table 3).



**Chart 3: Movement in Global and Domestic Prices of Select Commodities**



**Table 3: Commodity Price Changes: Global and Domestic**

(per cent)

Commodity Group	Annual Growth Rate (Log-linear trend: 1993-2009)		Coefficient of Variation	
	India	World	India	World
All Commodities	4.9	7.3	0.30	1.69
<i>Of which:</i>				
Food Items (excl. Edible Oils)	4.4	1.8	0.61	2.85
Oilseeds and products (incl. Edible Oils)	4.5	1.5	1.82	4.60
Mineral Oils	11.0	12.4	0.92	1.79
Metals	6.4	6.8	0.84	2.88

Note: For World Prices, price index closest to the corresponding WPI group is used from the IMF Commodity Price database.

Food prices in India are primarily determined by domestic demand supply factors and domestic price policy. India meets the bulk of its large food demand through domestic production, barring few commodities like edible oils and pulses where the import dependence is about 35 per cent and 15 per cent, respectively. In occasional shortage years, the country

has also resorted to imports for wheat and sugar though it is generally an exporter in these commodities (Table 4). India's occasional imports of such commodities translate into higher global food prices as the import demand is large. Hence, imports do not necessarily lead to domestic prices moving lower.

**Table 4: Production-Consumption Gap in Major Food items in India**

	(million tonnes)				
	Rice	Wheat	Pulses	Sugar	Oilseeds
2004-05	2.3	-4.2	-0.9	-4.1	-4.6
2005-06	6.7	-0.4	-1.0	0.7	-1.9
2006-07	6.6	2.4	-1.6	8.3	-6.2
2007-08	6.2	2.2	-2.6	5.1	-4.0
2008-09 P	6.0	9.8	-2.2	-8.1	-4.7
2009-10 P	-2.8	2.1	-2.3	-7.5	-6.0

P: Projected (-): Indicates shortage  
 Source: Estimated from data from Ministry of Agriculture and US Department of Agriculture

One important determinant of prices of agricultural production in India has been the minimum support price (MSP) announced by the Government for procurement of various commodities. The high increase in MSP since 2007-08 has given an upward bias to agricultural prices (Table 5).

**Table 5: Agricultural Commodities - Variations in MSP and WPI**

		(per cent)	
Commodity		Average Annual Growth Rate	
		2003-04 to 2006-07	2007-08 to 2009-10
Paddy	MSP	2.3	18.3
	WPI	2.0	10.9
Wheat	MSP	5.1	14.4
	WPI	5.5	6.7
Tur	MSP	1.7	18.0
	WPI	3.9	26.3
Moong	MSP	3.4	23.2
	WPI	11.3	13.2

MSP : Minimum Support Price  
 WPI for 2009-10 is averaged up to February 2010  
 Source: Ministry of Agriculture and Office of Economic Adviser,  
 Ministry of Commerce and Industry.

Reduced availability of foodgrains also tends to keep food prices high. As per the Economic Survey 2009-10, per capita net availability per day of cereals and pulses has been lower than that observed in the previous four decades. The per capita daily availability of foodgrains was 447 grams in the 1960s and 1970s, which successively increased to 459 grams in the 1980s and 478 grams in the 1990s but came down to 446 grams during

2000–08 and stood still lower at 436 grams in 2008. Severe drought in major parts of the country during the current year has perceptibly worsened food availability further. In particular, the situation is far more worrisome for pulses: its per capita net availability per day has gone down from around 60–70 grams during the 1950s to around 30 grams currently.

On the demand side, a major economic transformation in India in the recent years has been the surge in rural demand which has now lower dependence on the farm sector. As per the National Sample Survey (NSS) data, the share of rural consumption in overall consumption was about 58 per cent in 2006–07. The non-farm sector consumption accounts for about 55–60 per cent of the total rural consumption. While farm sector demand is more prone to the vagaries of weather, non-farm rural sector has imparted more stability in the recent years due to increased focus on the rural development, particularly through enhanced outlays under various public schemes.

Given the stage of our economic development, the demand for food items would increase with economic growth and rise in income levels. Demographic dividend which has been contributing towards India's growth and productivity, has also raised consumption demand, particularly on food. As per the United Nations projection, high-consumption cohort in the age-group of 15–59 individuals comprising around 65 per cent of India's total population will continue dominate demand till 2040.

Thus, lower per capita availability of foodgrains and structural shortage of key agricultural commodities like oilseeds and pulses combined with the rising demand have kept food price inflation high. This process has got further accentuated by spikes in global food prices.

## **Conclusions**

Recent surge in inflation has raised the concern whether the supply-driven increase could spillover to the generalised inflation process. Prolonged high inflation even if originating from supply side would give rise to increase inflation expectations and cause general prices to rise. Poorly anchored in inflation expectations makes long-term financial planning more complex with potential adverse effects on investment and growth. It is, therefore, important to keep inflation expectations anchored so that consumers do not mark up their long-run inflation expectations by reacting to a short period of higher-than-expected inflation.

The higher the inflation rate, the longer it takes for the inflation to revert to its trend. Slow return of inflation rate to its equilibrium level after a supply shock is known as “inflation persistence”, which is important in the determination of the pace of monetary policy adjustment to achieve the desired target. In our context, empirical analysis shows a high degree of persistence, especially in the case of food and edible oil groups. This hinders supply responses to work in a timely fashion.

Even though the supply side factors dominate the current inflationary pressures, given the risks of spillover into a wider inflationary process, there is need for policy response. Accordingly, the Reserve Bank began its exit from expansionary monetary policy in October 2009 by reducing the potential liquidity. This process was carried forward in January 2010 with an increase in cash reserve ratio (CRR) of banks by 75 basis points and then increase in policy reverse repo and repo rates by 25 basis points each in March 2010. While monetary policy action will anchor inflation expectations, there is an urgent need to address the issue of structural supply constraints, particularly in agriculture, so that these do not become a binding constraint in the long run making the task of inflation management more difficult.