

Making Sense of Persistently High Inflation in India

STHANU R NAIR

The rising prices of two product groups – primary articles and fuel – have been responsible for the build-up in headline inflation between December 2009 and August 2013. The most worrisome aspect is the high inflation in a majority of food articles in the last six years or so despite a favourable domestic food supply situation and low global food prices. Based on the analysis of the food expenditure pattern during 2004-12, this article points out that rising domestic demand pressures have contributed to a surge in the prices of six high-value food commodities – pulses, milk, egg, fish, meat and edible oil. Another possible reason for stubborn food prices is the rising cost of production of food commodities.

As India grapples with the dreaded monster called high inflation, various efforts on the part of the government and Reserve Bank of India (RBI) to cage it have not yielded the desired results. As on August 2013, the headline inflation rate, measured by year-on-year changes in the wholesale price index (WPI) (base 2004-05), stood at 6.10%. Overall retail inflation, measured as per the all-India new combined (rural plus urban) consumer price index (CPI) (base 2010), was at a higher level of 9.64% in July 2013. Such heightened pressure on generalised inflation has constrained the monetary policy response to the challenge of a slowdown in growth. More importantly, the persistence of food inflation has adverse welfare effects on the poor and common public, and undermines the effect of monetary policy on overall inflation. For the government, the spiralling prices pose a great threat to its political prospects with elections round the corner. The objective of this article is to trace the key drivers and possible causes of the stubbornly high inflation in India in recent years.

Key Drivers of Inflation

The current inflationary spiral began slowly in August 2009. The headline inflation rate crossed the “growth maximising” threshold level of 6% in December 2009 and remained mostly above this level until August 2013 (Figure 1, p 14). The average WPI inflation rate recorded during the 45-month period from December 2009 to August 2013 was 8.17% (Table 1) with the peak monthly inflation touching 11%. During the same period, the overall consumer price inflation rate, in terms of the CPI for industrial workers (CPI-IW), was also high with an average of 10.25%. The overall consumer price inflation, measured by the all-India new combined CPI, has been between 7.65% and 10.91% since January 2012 (Figure 2, p 14).

The rising prices of two product groups – primary articles and fuel – were mainly responsible for the build-up in headline inflation after December 2009. The inflation rate of these two product groups ruled high during most of the period from December 2009 to August 2013 (Figure 1). On the other hand, in the same period, the prices of manufactured products remained low/moderate. Whereas, on an average basis, manufactured products recorded an inflation of 5.63%, it was 12.12% and 11.46%, respectively, for primary articles and the fuel group (Table 1).

Table 1: Average Wholesale Price Index (WPI) Inflation Rate (%) (December 2009 to August 2013) (Base: 2004-05)

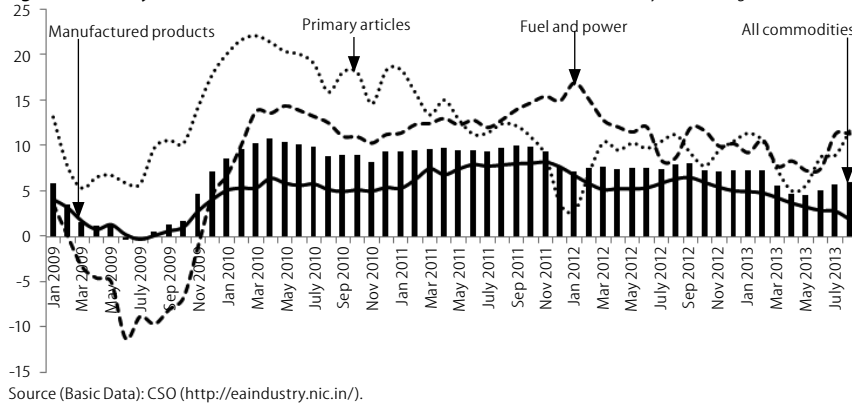
Items	Inflation Rate
All commodities (overall)	8.17
Primary articles	12.12
Food articles	11.43
Non-food articles	12.48
Minerals	15.91
Fuel and power	11.46
Coal	7.35
Mineral oils	13.42
Electricity	7.79
Manufactured products	5.63
Food products	7.14
Beverages and tobacco products	8.27
Textiles	6.68
Wood and wood products	5.97
Chemicals and chemical products	6.09
Basic metals, alloys and metal products	6.54

Source: Central Statistics Office (CSO).

Among primary articles, in terms of average inflation, minerals (15.91%) were the largest contributor, followed by non-food articles (12.48%) and food articles (11.43%). In the case of the fuel group, the rising prices of mineral oils were primarily responsible for the high inflation experienced from December 2009 to August 2013. Notably, the average inflation rate of all these product groups was much higher than the average overall inflation of 8.17% (Table 1). The high inflation of minerals was led by crude petroleum, metallic minerals, and other minerals.¹ In the non-food articles group, other non-food articles recorded the highest average inflation rate of 14.59% between December 2009 and August 2013, followed by oilseeds (12.89%) and fibres (12.18%). As in the case of WPI inflation, by registering an average inflation rate of 10.43% and 11.76%, respectively, the food and fuel groups played a key role in driving consumer price inflation for industrial workers

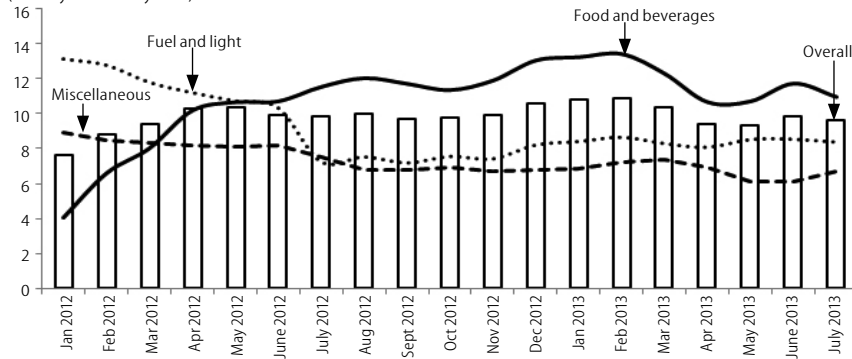
Sthanu R Nair (srn@iimk.ac.in) is with the Indian Institute of Management, Kozhikode.

Figure 1: Monthly Movements in Wholesale Price Index Inflation Rate (%) (January 2009 to August 2013)



Source (Basic Data): CSO (<http://eaindustry.nic.in/>).

Figure 2: Monthly Movements in Consumer Price Index (Combined: Rural + Urban) Inflation Rate (%) (January 2012 to July 2013)



Source (Basic Data): CSO.

between December 2009 and August 2013. A similar trend can be observed in the new combined CPI inflation of food and fuel, available from January 2012 (Figure 2).

Sticky Food Prices

From the perspective of the poor and common public, the most worrisome aspect of the recent overall price rise is the high inflation in a majority of food articles. On an average, from December 2009 to August 2013, the egg, meat, and fish group has recorded the highest inflation rate of 17.16%, followed by milk (11.78%), fruits and vegetables (10.84%), foodgrains (9.11%), condiments and spices (7.08%), and tea and coffee (6.14%). Except tea, all the other commodity subgroups under each food article group were subject to high average inflation, indicating the broad-based nature of the food articles price spiral. Interestingly, in the same period, the average inflation rate of food products (in the manufactured products group) also ruled high at 7.14%, which was the second largest among the commodity subgroups under manufactured

products and 1.15 percentage points higher than the average inflation for manufactured products. In terms of average inflation, oilcakes (9.67%) were the largest contributor to high food products inflation from December 2009 to August 2013, followed by the sugar group (8.10%), dairy products (7.80%), edible oils (6.99%), and tea and coffee processing (6.19%). The broad-based nature of the food price spiral was also evident in the commodity-wise consumer price inflation for food based on the CPI (IW).

An aspect that is a serious cause for concern is the stickiness of food prices. Food articles inflation has been at unacceptably high levels in the last six years or so (Table 2). On an annual average basis,

Table 2: Annual Average Food Inflation Rate (in %)

Category	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14*
Food articles (India)	9.09	15.27	15.60	7.30	9.90	10.98
Food products (India)	8.69	13.49	3.73	7.12	8.13	5.37
Global food inflation	3.03	-9.92	21.39	11.42	-5.32	0.19

* April to August 2013.
Source: CSO; FAO.

food articles inflation was in the range of 7.30% to 15.60% between 2008-09 and 2013-14 (up to August 2013). Interestingly, during the same period, the rate of inflation of food products was also high in a

majority of years. Such a trend has serious adverse welfare effects, given the high levels of malnutrition, poverty, and household spending on food in India. Strikingly, food inflation at the global level, based on the Food and Agriculture Organisation's (FAO) food price index with base 2002-04, has been low/negative during most of the period from 2008-09 (Table 2).

Contributory Factors

The high inflation in minerals and mineral oils is due to factors such as fluctuations in global crude oil prices because of political tensions in some parts of the world, the pass-through of increases in global prices of crude oil, domestic supply-side bottlenecks, and depreciation of the rupee. But what is perplexing is the persistence of an upside risk to food price inflation despite a favourable domestic food supply situation and low global food prices in recent years. One of the important factors held responsible for the spike in food inflation since 2008 is supply-side constraints in the years 2008-09 and 2009-10 (Nair and Eapen 2012). However, a look at agricultural production from 2010-11 reveals

Table 3: Annual Compound Growth Rate of Production of Various Food Commodities (in %)

Items	2006-07/2007-08 to 2009-10*	2008-09/2009-10 to 2012-13**
Rice	-1.14	2.73
Wheat	2.20	4.43
Coarse cereals	-0.50	2.28
Pulses	-0.34	6.45
Fruits	4.42	2.73
Vegetables	2.18	6.03
Tea	0.21	5.46
Coffee	5.14	3.27
Milk	3.86	4.76
Egg	6.05	6.26
Meat	7.24	9.23
Fish (marine and inland)	5.94	4.10
Spices	-3.99	12.89
Oilseeds	-8.55	5.91
Edible oils	-4.18	2.86
Sugar cane	-8.38	5.10

* For rice, wheat, and coarse cereals the growth figures are for 2006-07 to 2009-10; and for others, from 2007-08 to 2009-10.
** For rice, wheat, and coarse cereals the growth figures are for 2008-09 to 2012-13; for fish, from 2009-10 to 2011-12; and for all others, from 2009-10 to 2012-13.

Source: *Handbook of Statistics on Indian Economy 2012-13*, RBI (for tea and coffee); *Annual Report 2012-13*, Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture (for milk, egg, meat and fish); Directorate of Vanaspati, Vegetable Oils and Fats, Ministry of Consumer Affairs, Food and Public Distribution (for edible oils); *Indian Horticulture Data Base 2012* and National Horticulture Board (for fruits, vegetables, and spices); Department of Agriculture and Cooperation, Ministry of Agriculture (for all others); and *The Economic Times*, 31 December 2012 (for 2012-13 milk, egg and meat).

that the food-supply situation in India has improved considerably (Table 3, p 14). The growth rate of output of all the major food commodities accelerated significantly during the output cycle relevant to the period (December 2009 to August 2013) covered in this paper. In contrast, growth figures recorded during the output cycle applicable to the high food inflation years 2008-09 and 2009-10 were mostly lower. Hence, a weak supply response was hardly the cause for high food inflation between December 2009 and August 2013.

This turns our attention to another key reason cited for soaring food prices – the growing demand for high-value agriculture products, in particular, protein-rich food items such as pulses, milk, livestock, and fish. An earlier analysis of food expenditure pattern based on the National Sample Survey Office's (NSSO) household consumer expenditure data available up to 2009-10 offered very limited evidence to back this demand-side explanation for high food inflation (Nair and Eapen 2012). Rising demand was found to cause upward price pressure only in the case of milk. However, 2009-10 having been a “non-normal” year and with the release of the results of 68th round (July 2011-June 2012) of the National Sample Survey (NSS) on household consumer expenditure recently, it would be desirable to revisit the demand-side angle of food price escalation using the latest information.²

Tables 4 and 5 present the trends in food expenditure pattern over the years at current and constant prices excluding the “non-normal” year 2009-10. It is seen that the share of high-value food commodities – pulses, milk, egg, fish and meat – in total monthly per capita consumer expenditure (MPCE) on food at current prices increased in rural and urban India over the period from 2004-05 to 2011-12. On the other hand, the share of sugar, edible oils, and fruits and vegetables declined during the same period in both the rural and urban sectors. The percentage points increase recorded in the expenditure shares of pulses, milk, egg, fish, and meat in 2011-12 was not only significantly different than in other periods, but also historically high, both in rural and urban

Table 4: Trends in Percentage Composition of MPCE (at Current Prices) on Groups of Food Items
(Share in Total Consumer Expenditure on Food)

	Rural					Urban				
	1987-88	1993-94	1999-2000	2004-05	2011-12	1987-88	1993-94	1999-2000	2004-05	2011-12
Cereals	40.99	38.30	37.31	32.72	24.62	26.46	25.69	25.70	23.65	19.02
		(-2.69)	(-0.99)	(-4.59)	(-8.10)		(-0.77)	(0.01)	(-2.04)	(-4.63)
Gram	0.38	0.28	0.22	0.24	0.35	0.29	0.32	0.23	0.25	0.32
		(-0.10)	(-0.06)	(0.02)	(0.11)		(0.03)	(-0.09)	(0.01)	(0.07)
Cereal substitutes	0.21	0.17	0.12	0.13	0.14	0.12	0.12	0.09	0.12	0.14
		(-0.04)	(-0.04)	(0.00)	(0.01)		(0.00)	(-0.03)	(0.03)	(0.02)
Pulses and pulse products	6.22	6.02	6.41	5.59	6.39	6.04	5.55	5.90	5.03	5.59
		(-0.20)	(0.39)	(-0.82)	(0.80)		(-0.49)	(0.35)	(-0.87)	(0.55)
Milk and milk products	13.52	15.02	14.74	15.38	18.67	17.06	17.94	18.05	18.62	20.20
		(1.50)	(-0.28)	(0.64)	(3.29)		(0.88)	(0.11)	(0.57)	(1.59)
Sugar	4.47	4.84	4.01	4.31	3.80	4.19	4.35	3.41	3.55	3.00
		(0.36)	(-0.83)	(0.30)	(-0.51)		(0.16)	(-0.95)	(0.14)	(-0.55)
Edible oil	7.82	7.03	6.29	8.36	7.75	9.47	8.03	6.53	8.13	6.89
		(-0.79)	(-0.74)	(2.07)	(-0.61)		(-1.44)	(-1.50)	(1.60)	(-1.24)
Egg, fish and meat	5.07	5.29	5.59	6.05	7.33	6.33	6.19	6.52	6.36	7.25
		(0.22)	(0.30)	(0.46)	(1.29)		(-0.14)	(0.33)	(-0.16)	(0.89)
Vegetables	8.16	9.56	10.38	11.08	9.95	9.39	9.99	10.69	10.47	8.82
		(1.40)	(0.82)	(0.70)	(-1.13)		(0.60)	(0.70)	(-0.22)	(-1.65)
Fruits (fresh)	2.55	2.76	2.89	3.39	3.08	4.49	4.87	5.03	5.29	4.55
		(0.21)	(0.14)	(0.49)	(-0.30)		(0.39)	(0.16)	(0.25)	(-0.73)

Figures in brackets are percentage points change over the years; percentage shares of individual food items do not add to 100 since salt, spices and beverages are excluded.

Source: Household Consumer Expenditure in India, 2007-08; NSS 64th round for 1987-88 to 2004-05; and Key Indicators of Household Consumer Expenditure in India, 2009-10, 2011-12; NSS 66th and 68th rounds.

India. Moreover, except pulses, the expenditure shares of all these food commodities registered in 2011-12 were new highs. Broadly, similar conclusions were reached from an analysis of the MPCE on food in real terms available for rural India (Table 5).³ Apart from total food, the real consumption expenditure on pulses, milk, edible oils, egg, fish, and meat increased during 2004-12. However, only in the case of milk did the growth (during 2004 to 2012) as well as absolute level (in 2011-12) of real MPCE stand at an all-time high after 1993-94 (Tables 4 and 5). Thus, based on the analysis of the food expenditure pattern during 2004-12, it can be concluded that rising domestic demand pressures have contributed to the upward spiral in the prices of six high-value food commodities – pulses, milk, egg, fish, meat and edible oil – in recent years. However, a “secular shift” in the consumption pattern in recent years was observed only in the case of milk, egg, fish and meat.

Another possible reason for stubborn food prices is the rising cost of production (COP) of food commodities. The main reasons for the escalation in the costs of producing food are the rapid increase in farm input prices and long-term structural deficiencies such as low productivity, fragmented landholdings, and declining public investments in

agricultural infrastructure (CACP 2012; Dev 2009). With the exception of agricultural machinery and related inputs, the prices of various farm inputs, measured by the WPI inflation rate, were subject to significant increases in recent years. On an average basis, the WPI inflation rate of fodder recorded an increase of 19.64% between December 2009 and August 2013, followed by light diesel oil (19.01%), electricity for agricultural purposes (12.66%), high speed diesel oil (12.43%), lubricants (10.04%), fertilisers (9.74%), and oilcakes (9.67%).

Table 5: Real MPCE on Groups of Food Items by Urban India (in Rs)

	1993-94	1999-2000	2004-05	2011-12
Cereals	27.59	26.98	25.87	25.34
		(-0.37)	(-0.84)	(0.29)
Pulses and pulse products	5.50	5.83	5.14	5.42
		(0.97)	(-2.52)	(0.77)
Milk and milk products	20.91	22.38	21.75	24.41
		(1.13)	(-0.57)	(1.65)
Edible oil	9.84	11.29	11.89	12.18
		(2.29)	(1.04)	(0.34)
Egg, fish and meat	6.65	6.79	5.97	6.52
		(0.35)	(-2.57)	(1.26)
Vegetables and fruits	16.34	18.06	17.57	15.55
		(1.67)	(-0.55)	(-1.75)
Food total	107.00	109.51	105.90	115.65
		(0.39)	(-0.67)	(1.26)

Individual food items do not add to food total as only selected food commodities are considered; figures in brackets are the compound annual growth rate of real MPCE over the previous period.

Source: Household Consumer Expenditure in India, 2007-08; NSS 64th round for 1987-88 to 2004-05; Key Indicators of Household Consumer Expenditure in India, 2009-10, 2011-12; NSS 66th and 68th rounds.

Significantly, these figures are higher than the average headline inflation of 8.17% in the same period. As for labour cost, a key element of farm input cost,⁴ the agricultural labour wage rate (in nominal terms) grew at an average annual rate of 20% (CACP 2013) between 2009 and 2012 (January-December). Agricultural wages increased substantially in real terms as well. Between 2005 and 2011, the real wages of agricultural labour in rural India grew at a rate of 2.67% and 3.67% for men and women, respectively, compared to 0.10% and -0.05% recorded for men and women, respectively, from 2000 to 2006 (Dreze and Sen 2013). Given these trends, one can hardly ignore the contribution of the cost factor to firming up food prices in recent years. The persistence of food

inflation over the last six years despite various anti-inflationary measures and changing output conditions strengthens the case for seriously analysing the problem from a cost escalation angle.

NOTES

- 1 On an average, crude petroleum, metallic minerals, and other minerals registered an inflation of 18.67%, 13.13% and 11.82%, respectively, from December 2009 to August 2013.
- 2 On the basis of the recommendations of the National Statistical Commission, the government has conducted a "large sample" consumer expenditure survey covering the period 2011-12 (July to June). Among others, the principal reason for undertaking a new survey two years after the previous "large sample" survey was that being a poor agricultural year, 2009-10 was a "Non-normal Year" (GoI 2011).
- 3 For details on deriving the MPCE on food at constant prices, see Nair and Eapen (2012).
- 4 Estimates show that more than 40% of the total variable CoP in Indian agriculture consists of labour (GoI 2012).

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