

Understanding Recent Trends in Inflation in India

Mihir K. Mahapatra

Professor, SDMIMD, Mysore

mihir@sdmimd.ac.in

Abstract

The study aims at investigating the factors associated with the overall inflation in India with focus on food inflation in the recent past. Based on the empirical results it can be inferred that the overall increase in the general price level is primarily driven by the increase in the prices of primary products, manufactured products, fuel and power, and food grains. The findings also indicate that a fairly stable positive growth in the private final consumption expenditure has influenced the demand for food grains during 2005-11. On supply front, a relatively slow growth in the production and distribution of food grains affected the supply of the said items in the last one decade.

Keywords : *India, Inflation, Food Price, Agriculture.*

Introduction

The Indian economy has moved to a high growth trajectory in the recent years as the annual growth rate varies between 7 to 9.6 per cent during 2006-7 to 2011-12.¹ The economy has also weathered the crisis emanated from the global financial crisis during 2008-09. But this is noticed along with the stubbornly high inflation especially food inflation. As

¹ Inflation measured by WPI hovers around 7.6 per cent during April-August 2012 with further rise to 7.81 per cent in Sept 2012.

per the latest estimate, inflation (measured by WPI) rose to 7.81 per cent in September 2012 and the food inflation stood at 7.86 per cent in the same period. This is expected to go up further on account of slow growth in farm output, weakening rupee and increase in the price of petroleum products.² Therefore, stickiness of core inflation remains a key challenge for the policy makers.

The standard economy theory says that prevalence of high inflation reduces purchasing power of the currency, affects the fixed income group and widens income disparity among the people. This becomes more pronounced if the overall inflation is driven by food inflation as it can affect the consumption pattern of the households and therefore, aggravates the level of malnutrition and poverty. This necessitates identification of the sources of inflation. In other words, it makes sense to examine whether inflation is primarily due to supply shock or demand overheating though it can be the outcome of both the said factors. Against this backdrop, the paper has made an attempt to examine the key determinants of inflation with focus on food inflation. The paper is organised as follows. Section I deals with the issues related to definition and measurement of inflation. In section II, an attempt is made to identify the key factors that have contributed to the rise in the general price level in recent years. The penultimate section is devoted to address the recent food inflation. This follows summary and concluding remarks (section IV).

² On account of scanty rainfall in the *Khari* season, the projected growth of farm output will vary between 0.5 to 1 per cent. Of late, the country is spending nearly US \$140 billion to import crude oil.

I

Inflation and its Measurement: An Overview

Inflation is a situation characterized by the continuous rise in the aggregate price level. In other words, it is the rate of change of the general price level, computed based on the weighted average prices of a basket of goods and/or services.³ For computation of the index scores, different price indices are used including Laspeyres and Paasche's price index.

Inflation measured by the Consumer Price Index (CPI) differs widely across space and over time (Table 1). From table 1 it is evident that U.S., U.K, Japan and Australia have experienced a fall in the rate of inflation in the 1990s as compared to the 1980s. But during the said period India, Malaysia and Pakistan have experienced an increase in the rate of inflation.

Table 1: Inflation Rate(CPI)in Select Countries (Annual Avg. in percentage)

SI No.	Country	1980-90	1990-2000	2012
1	India	8.6	9.1	9.3
2	US	4.2	2.7	2.1
3	UK	5.8	2.9	2.8
4	Japan	1.7	0.7	(-)0.1
5	Singapore	1.6	1.7	4.5

³ The wholesale price index does not capture services though it is partly captured in the Consumer Price Index.

6	Indonesia	8.3	13.7	4.3
7	Malaysia	2.6	3.6	1.7
8	China	NA	8.6	2.6
9	Pakistan	6.3	9.7	9.7
10	Australia	7.9	2.1	1.9
11	Russian			
	Federation	NA	99.1	5.1

Sources (i) World Bank (2002): World Development Indicators.

(ii) IMF: International Financial Statistics, various issues

(iii) The Economist, January 2013.

Among the select countries, Russia recorded the highest increase in the price level as inflation measured by the CPI reached almost 100 per cent during the 1990s. Contrary to it, the increase in the price level is the lowest in Japan during the said period. This has further declined to (-) 0.1 per cent in 2012. In other words, Japan is passing through a phase of recession while Pakistan and India have experienced a rise in the price level by almost 10 per cent in the recent years.

A comparative analysis of the changes in the general price level in 2012 vis-a-vis 1990s reveals that there has been a substantial decline in the rate of inflation in the Russian Federation in 2012 followed by China and Indonesia. But there is almost no change in the general price level in two developing countries, namely, India and Pakistan in the

recent years as compared to average inflation during the 1990s.

An analysis of the movement of general price level reflects a disquieting trend in India in the recent past. The rise in general price level measured by the WPI was hovering around 4.5 per cent in 2005-06, almost consistently went up in the subsequent years to arrive at 8.05 per cent in 2008-09 and close to 10 per cent in both 2010-11 and 2011-12.⁴ This is noticed along with the rise in food inflation. For instance, the average rise in primary food articles that remained at an average level of 15.27 per cent in April-January 2009-10 went up to 16.75 per cent in 2010-11 (GOI: 2012). It is only during April-January 2011-12, the average inflation in food articles declined to 7.15 per cent with further marginal decline to arrive at 7 per cent in May 2012. But this did not persist for long as the overall inflation measured by WPI has gone up to 7.8 per cent in Sept. 2012. And this raises few pertinent questions including how to measure inflation and what drives inflation especially food inflation in recent years?

Measuring Inflation

In India, inflation is measured by the Gross Domestic Product (GDP) deflator or Net Domestic Product (NDP) deflator, Wholesale Price Index (WPI), Consumer Price Index (CPI), and Private Final Consumption Expenditure (PFCE). The GDP deflator measures the change in prices that

⁴ This excludes the period of recession. Inflation measure by WPI was 4.74 per cent in 2007-08 and 3.8 per cent in 2009-10.

has occurred between the base year and the current year. For estimation of inflation we calculate the ratio of Nominal GDP to the real GDP in the current year and multiply this with 100.⁵ The percentage variation in the Index scores in the current year vis-a-vis the base year scores reflects the extent of inflation experienced in the current year. This method is widely used to deflate time series macroeconomic data primarily because it is based on the entire economy and easily available. However, it is difficult to depend on nominal GDP figures as the actual data are available with two years lag, with a frequency of once in a year. Of course, one can use quick estimate, provisional estimate or advance estimate figures but the reliability of the figure can very well be questioned.

One of the key methods widely used to measure inflation in India is the Wholesale Price Index (WPI). Of late, it is available on a monthly basis rather than weekly basis. It is the index of the average price of all commodities produced and /or transacted in the economy at the wholesale level. This includes price of raw materials and semi-finished goods but excludes services (Education, Health, Banking, Transport and Communication). For calculation of WPI scores, Laspeyres' Price Index is used. Based on the extent of variation in the index scores inflation is calculated over time.

As per the latest series (base: 2004-05), the number of commodities considered for estimation of WPI is 676, with

⁵ Nominal GDP values output using *current prices*. It is not corrected for inflation. Real GDP values output using the prices of a *base year*. In other words, real GDP is corrected for inflation.

addition/revision of 417 new items in the current series as compared to the old 1993-94 series (Table 2). In the calculation of the index value, major weight is assigned to the 'manufacturing products' followed by 'primary articles' and 'fuel and power'. From table 2 it is evident that there does not seem to be a major variation in the weight assigned to different commodities in the new series as compared to the old series.

**Table 2: Changes in the Wholesale Price Index:
Old versus New Series**

Commo- -dities/ Weight	Weights		No. of Commodities		New Items Added / Revised
	New Series (2004-05 =100)	Old Series (1993-94 =100)	New Series (2004-05 =100)	Old Series (1993-94 =100)	
A. All Commodities	100	100	676	435	417
B. Primary Articles	20.12	22.03	102	98	11
(i) Food Article	14.34	15.4	55	54	1
(ii) Non-Food & Minerals	5.78	6.63	47	44	10
C. Fuel and Power	14.91	14.23	19	19	0
D. Manufactur- -ed Products	64.97	63.75	555	318	406
(a) Food Products	9.97	11.54	57	41	25
(b) Non-food products	55	52.21	498	277	381

Source: Govt. of India (2012): *Economic Survey 2011-12*, Govt. of India, Oxford University Press, New Delhi.

Among the commodities, around 25 per cent weight is assigned to 112 food items (including food article and food products). Added to this, 15 per cent of total weight is assigned to 'fuel and power'-the items that can influence the price of food products and therefore, food inflation.

The second most widely used index to measure inflation is the Consumer Price Index (CPI). This is the index of select average retail price of goods and services contained in the consumption basket of the people living in rural and urban areas. In other words, it reflects the cost of living conditions of the people living in the country with focus on both rural and urban areas .

Earlier Consumer Price Index was estimated for different homogeneous groups of people based on their occupation, namely, CPI Industrial workers (CPI-IW), CPI Urban Non-Manual Employees (CPI-UNME), CPI Agricultural Labourers (CPI-AL)and CPI Rural Labour (CPI-RL). But the central statistics office of Ministry of statistics and Programme has introduced a new CPI series on base 2010 since January 2011. The new CPI is not estimated separately for different sections of the society based on their occupation rather it is defined in three categories-rural, urban, and all India. And the figures are available for the country, states and union-territories across months.

For estimation of CPI Urban, we rely on 310 towns in the country while CPI rural covers 1,181 villages across the country. And assignment of weight is on the basis of average monthly consumer expenditure of an urban/rural

H.Hs obtained from the NSS 61st round (2004-05) consumer expenditure survey data (GOI: 2012) . Overall, the Consumer Price Index broadly captures 4 categories of items, namely, (i) food beverage and tobacco, (ii) fuel and light, (iii) housing , (iv) clothing, bedding and footwear.

In India, the policy makers heavily depend on WPI and CPI to monitor inflation though both have their own advantages and weakness. For instance, the Central bank used to monitor CPI while formulating monetary policy so as to maintain a certain level of inflation in the country. Usually, CPI is preferred to WPI as changes in the consumption or investment demand on account of changes in the monetary policy will affect the retail prices to a large extent. However, this suggests that it is not rational to argue that CPI is always better than WPI as the commodities captured in the commodity baskets widely differ. Even the weight assigned to the same commodities also differs. For instance, in the old series, food has a larger weight in CPI (CPI- I W: 46 per cent , CPI-AL: 69 per cent) as compared to WPI (27 per cent). Also Fuel is assigned larger weight in the WPI (14.2 per cent) than CPIs (5.5. to 8.4 per cent). This implies that CPI is more sensitive to changes in the prices of food items while WPI is relatively more sensitive to changes in the prices of fossil fuel. Added to this, prices of goods bought and sold in the wholesale market and retail market cannot be the same on account of the cascading effect. In other words, the difference between the retail and wholesale prices arise because sellers include a profit margin before selling the commodities to the consumers in the retail

market. This also depends on the elasticity of the product and extent of tax burden passed on to the consumer by the producer. In addition, WPI ignores service sector in spite of its major contribution to the National Income.

Apart from the above said price indices, Private Final Consumption Expenditure Deflator (PFCED) is also used to measure inflation. This is calculated based on the consumption expenditure (PFCE) at current prices over constant prices with base 2004-05. This is essential as price changes may compel consumers to switch from one good to another. And therefore, it is considered as a preferred alternative method of measuring inflation.

II

What Drives Inflation?

A peep into the history reveals that our policy makers have succeeded in containing inflation to the single digit level during the past few decades barring few years when it had reached the double digit level. In other words, India is a moderate inflation country though there are instances of increase in the general price due to war, drought and commodity price shocks (Mohanty:2010). But the trend has reversed in the recent past. The overall inflation measured by the WPI hovered around 7 per cent during 2005-06 to 2011-12 and this remained between 8-10 per cent in 2008-09, 2010-11 and 2011-12 (Table 3). As per the latest estimate, the headline inflation surged to a ten-month high of 7.81 per cent in Sept. 2012 as compared to 7.55 per cent recorded in August 2012. This indicates that the headline inflation is hovering around 8 per cent in the recent past.

Apart from the persistence of stubbornly high inflation, there seems to be a wide fluctuation in the WPI scores over the years. This is evident from the headline inflation that was hovering around 4 per cent in 2009-10, went up to 9.6 per cent in the next year with a small decline in the subsequent year (2011-12) to arrive at close to 9 per cent.

Table 3: Annual (fiscal year) Average Inflation
(Base: 2004-05=100) (per cent)

Year	WPI	Manufactured Products	Agricultural Products
	Weight:100	Weight: 64.97	Weight: 18.59
2005-06	4.5	2.4	3.4
2006-07	6.6	5.7	8.8
2007-08	4.7	4.8	8.0
2008-09	8.1	6.2	9.9
2009-10	3.8	2.2	13.1
2010-11	9.6	5.7	17.0
2011-12P	8.8	7.1	7.5
Average	6.6	4.9	9.7

Note: Price index for agricultural products is a composite index of the sub-groups (food and non-food articles).

Sources (i): Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India. (ii) GOI (2012): Economic Survey 2011-12, Oxford University Press, New Delhi

To understand the relative share of different groups of commodities in the overall inflation, a disaggregated

analysis is attempted in this part. In the WPI, 65 per cent weight is assigned to the manufactured products while it is 18.6 per cent for the Agricultural products. The average inflation in the manufactured products hovers around 5 per cent during 2005-12 while it is close to 10 per cent in the agricultural products. This indicates a relatively faster increase in the prices of agricultural products as compared to the manufactured products during the said period.

For a proper analysis of inflation, it can be decomposed into two parts: 'core' and 'non-core' components. The 'core inflation' corresponds to inflation emanating from demand pressures while the 'non-core' component emphasises the supply side shocks emanating from movements in food and oil price (Moorthy et.al. 2011). A supply shock is noticed when bad weather has affected food production or other disruptions has affected the supply and therefore, increased the price of the commodities. Similarly, the demand constraint can be on account of the growth of per capita income leading to a rise in the demand for commodity and hence, the rise in price level.

The contribution of different commodities to the overall inflation during the last two years (2010-12) reveals that inflation is primarily driven by the increase in the prices of primary products and/or manufactured products, rise in price of 'fuel and power' and 'food grains'. For instance, in 2011-12, Manufactured products contributed close to 50 per cent of WPI inflation followed by primary articles and fuel

having 28 per cent and 23 per cent share respectively. But this was not the case in 2010-11 as 46 per cent of WPI inflation was due to increase in the price of primary commodities followed by the manufactured products and fuel having the respective share of 35 per cent and 19 per cent. The price rise in the non-food raw materials dependent manufactured products in 2011-12 was primarily due to imported global commodity inflation (GOI: 2012). For instance, during Jan-Dec 2011, there was a substantial rise in the price of silver, cotton, fertiliser, groundnut oil, coffee, gold, iron and coconut.⁶

Apart from the above said determinants, 'fuel and power' together can also influence the general price level to a large extent as 15 per cent weight is assigned to 'fuel and power' in WPI. And oil is one of the major importable items to India as around 75 per cent of our country's crude oil requirement is met through imports. This indicates that any insignificant change in the international oil price can have an adverse impact on the overall inflation in the country. And this becomes a cause for concern when rupee is weakening and there is no noticeable change in the import requirements of the petroleum products.

On account of the increase in price of international crude oil (Brent), the average price of Indian basket of crude oil

⁶During January-December 2011, price of silver went up by 75 % while price of cotton increased by 45% fertilizers: 43 %, Groundnut oil: 41%, coffee: 38 %, gold: 28%, iron: 15%, coconut: 54 % (GOI: 2012).

went up substantially during the last two years. The price of Indian basket of crude oil which was US \$ 69.76 per barrel in 2009-10, went up to US \$ 85.09 per barrel in 2010-11 and further rose to US \$ 109.97 per barrel in 2011-12 (up to Dec 2011). This got reflected in the increase in the price of non-administered mineral oil (aviation turbine fuel, bitumen, furnace oil and naphtha) by 41 per cent between September 2010 to January 2011 (Gol: 2012). During the same period, there was an increase in the price of administered mineral oil (LPG, Kerosene and Diesel) to a smaller extent, i.e., 11 per cent (Gol: 2012).

Increase in prices of the fossil fuels in the domestic markets is also partly on account of the growth of per capita income leading to increase in the demand for the product and persistence of relatively higher tax rate. Added to this, international Crude oil price have steadily been increasing since Dec 2008, and remained volatile during 2011-12 partly on account of the political upheaval in major oil exporting countries. This was further aggravated by the increase in uncertainty in the global economic environment (GOI: 2012). This scenario also deteriorated in recent years on account of withdrawal of subsidy on petroleum products and persistence of unfavorable exchange rate of rupee with major currencies.⁷ In response to the prevailing high inflation, the RBI has adopted various monetary policy instruments. But the monetary tightening had failed to contain inflation substantially (Bose: 2012).

⁷ As on October 30, 2012, US 1 \$ = Rs 53.97

III

Food Price Inflation in India

India has experienced a reasonably high food price inflation during the last few years. Empirical evidence reveals that food inflation entered the double digit level in April 2009 and crossed the 20 per cent level in December 2009 (GOI: 2012). A somewhat similar trend was observed in the subsequent period with minor variation across months. This implies that consumers are expected to spend more on food compared to the previous year to maintain the same consumption level. In other words, it can very well affect savings to GDP ratio, food and nutrition deficiency of the poorer households (Chand: 2010). This can also dampen the welfare of the poorer households who used to spend a major part of their income on food.

Food inflation is not a recent phenomenon. Indian economy had experienced a rise in the prices of food products several times in the past few decades. And this was primarily on account of flood, drought and natural disaster and hence, it was a short-term phenomenon. But the current trend reveals that it is primarily on account of some structural problems supplemented by the factors cited above. In this context, Rajiv Kumar et.al. (2010) argued that increase in food price in our country was moving in tandem with the global trend but it went up at a relatively faster rate in India from mid-2009 onwards. This was primarily attributed to fall in *Kharif* production due to severe drought.

Table 4: Average Percentage Increase in Prices of Food Articles & Food Products in WPI : 2005-06 to 2011-12 (Base: 2004-05)

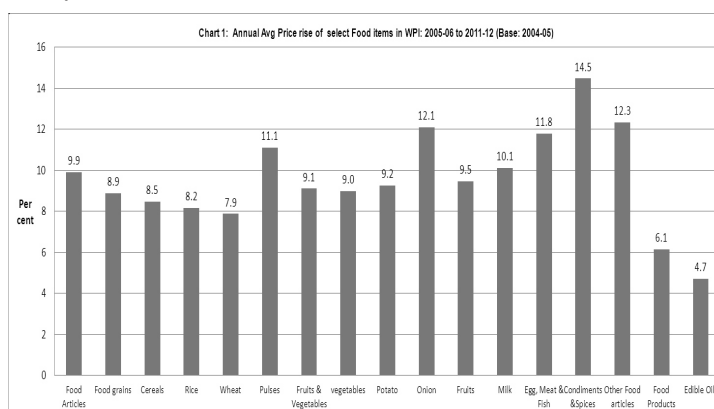
Items	Weight	Average Increase in Price
Food Articles	14.34	9.9
Food grains	4.09	8.9
Cereals	3.37	8.5
Rice	1.79	8.2
Wheat	1.12	7.9
Pulses	0.72	11.1
Fruits & Vegetables	3.84	9.1
Vegetables	1.74	9.0
Potato	0.20	9.2
Onion	0.18	12.1
Fruits	2.11	9.5
Milk	3.24	10.1
Egg, Meat & Fish	2.41	11.8
Egg	0.19	9.0
Fish Inland	0.57	15.8
Fish Marine	0.72	14.3
Mutton	0.35	10.6
Beef and Buffalo meat	0.12	10.8
Poultry & Chicken	0.41	4.8
Pork	0.06	12.1

Condiments & Spices	0.57	14.5
Other Food articles	0.18	12.3
Food Products	9.97	6.1
Sugar, Khandsari & Gaur	2.09	9.3
Sugar	1.74	9.8
Gaur	0.08	12.2
Edible Oils	3.04	4.7
Groundnut oil	0.3	7.7
Rice Bran Oil	0.18	6.3
Cotton seed oil	0.26	6.9
Mustard and rapeseed Oil	0.45	4.8
Soya bean Oil	0.38	6.1
Copra Oil	0.1	3.0
Maximum Increase		15.8
Minimum Increase		3.0
Average Increase		9.3

Basic source: Office of the Economic Advisor, Ministry of Commerce and Industry, Govt. of India.

To examine the extent of rise in food prices during 2005-06 to 2011-12, we have estimated the average increase in price of different food articles and food products during the said period (Table 4). The estimation is based on the WPI with the new base year 2004-05. From table 4 and chart 1 it is

evident that on an average, prices of food products and food articles went up by close to 10 per cent during the last 7 years. The extent of rise varies from close to 16 per cent in some 'non-veg' items to as low as 3 per cent in 'Copra oil'. Overall, a substantial increase in price (10 per cent and above) is noticed in select 'non-veg' items including 'Fish' followed by 'Condiments and Spices', 'Onion', 'Pulses', 'Milk'. 'Food grains' and 'Fruits and Vegetables' together also experienced 9 to 10 per cent rise in prices in the said period. However, the extent of price rise is relatively low in 'Edible oils' and 'food products' as a whole though select food products have experienced a double digit growth. Slow growth in the prices of food products is primarily on account of a decrease in the prices of 'Sugar and Gaur' for two years, i.e., 2007-08 and 2008-09.



In order to understand the factors contributed to the recent food inflation, an attempt is made to examine the growth in demand and supply of food grains. Normally, a mismatch between the said indicators will affect food inflation. An analysis of the growth and pattern of

consumption expenditure reveals a fairly positive and stable growth in the private final consumption expenditure (lying between 7 to 9.5 per cent per annum) during 2005-06 to 2010-11.⁸ The annual growth of the said indicator declined to 7.1 and 7.4 per cent respectively in 2008-09 and 2009-10 primarily due to slow growth in income on account of recession. However, this is noticed along with the changes in the share of expenditure on different food items, i.e., a shift from 'cereals' to 'protein' rich items including pulses, milk, egg and so on and so forth in 2009-10 as compared to 1987-88.⁹ Among the select protein rich items (Pulses, Milk, Eggs, Meat and Fish), the price of pulses went up substantially during July 2005- July 2010. Price of other select items mentioned above also registered a distinct upturn during the said period. However, the extent of rise in price of the select items mentioned above is relatively slow as compared to pulses (Gokarn: 2010). A substantial increase in the price of pulses is also a recent phenomenon.

The increase in the share of expenditure on protein rich food items can be attributed to the increase in 'per capita income' especially the wage income in the rural areas. This is the outcome of the implementation of Mahatma Gandhi National Rural Employment Guarantee scheme. In other words, the demand for proteins is income elastic in nature, i.e., the share of proteins in the representative diets increases as income increases (Gokarn: 2010).

⁸ This is based on information provided by the Central Statistical Organization, Govt. of India.

⁹This is based on different rounds of NSSO data.

On supply front, a mixed picture is noticed. Annual average growth of net availability of food grains and per capita availability of food grains during the last one decade recorded 2.5 per cent and 1 per cent growth respectively with a wide variation over the years. This got reflected in the average net production and net availability of food grains as it remained at 185 and 180 million tonnes respectively during the last one decade. The per capita net availability of food grains hovered around 162 kg per year in the said period. However, this is not true for all the commodities. For instance, there is not much variation in the net availability of cereals and pulses as it hovers around 166 and 14 million tonnes respectively during 2001-10. Accordingly, the respective average per capita availability of cereals and pulses remains at 400 and 50 grams per day with a wide variation in annual growth.

One of the key determinants of the growth of agricultural output is the rainfall recorded in a specific year/period. Empirical evidence reveals that around 60 per cent of the total districts in the country have received normal/excess rain fall in the last one decade barring 2001 and 2009 when it had reached 37 per cent and 42 per cent respectively. This implies that around 40 per cent of the total districts have received scanty/deficient rain fall in the last one decade. And the scenario got aggravated in 2001 and 2009. In this context, Chand (2010) argues that increase in food price is due to the drought in 2009 and the carry-over effect of low growth in food grains production in 2008-09.

Added to this, availability of essential food items for BPL families in the PDS outlets might have acted as a disincentive to produce more food grains especially paddy and wheat. Apart from the above said issues, the role of middlemen and traders in increasing the price of food items cannot be undermined. In other words, the beneficiaries (farmers) do not receive adequate revenue by selling food grains as the traders are in a better position to share a major part of the total revenue earned.

Considering the nutritional dimension to development, it can be argued that with the growth in per capita income (as noticed during the last few years), an increase in demand for protein rich food in people's diet can be a normal phenomenon (Gokarn: 2010). And the persistent demand-supply imbalances in the protein rich items made protein more expensive. Contrary to it, Nair et. al. (2012) argue that food price inflation during 2008-10 was due to domestic supply side constraints of select items including Pulses, fruits, vegetable, meat, fish, spices, tea, coffee and sugar. The increase in price of milk and eggs is due to the rise in costs of production. The authors also argue that there is no concrete evidence to prove that higher food prices is the outcome of a shift in consumption pattern towards high-value agricultural products. Some other factors that have contributed to food inflation include increase in oil price in the international market and to some extent high costs of food imports.

Overall, a relatively slow growth in the production and distribution of food grains could not enhance supply of food

grains substantially in the last one decade. This can be on account of many factors including non-availability of inputs (workers), increase in costs of production especially wage payment, ineffective credit market and so on and so forth. This suggests a shift in policy focus to agricultural production, distribution and appropriate pricing of strategic food and fuel (Bose: 2012).

IV

Concluding Remarks

Of late, taming inflation has become one of the key challenges for the policy makers. This is a cause for serious concern as there is no marked decline in 'food inflation' in the recent past. And this is likely to aggravate further on account of scanty rain fall in many states during the *Khariff* season of 2012 and weakening of the domestic currency against major currencies in the world.

In response to the persistent rise in the general price level, both the RBI and govt. of India have adopted different policy measures including the recent proposal of FDI in multi-brand retail. But this will not be adequate enough to tackle the problem unless a root cause analysis of the current crisis is addressed by the policy makers. In other words, it is essential to understand the nature and causes of the recent inflation with focus on both domestic and global factors. Accordingly, appropriate short-term and long run policy measures need to be adopted.

The stubbornly high food inflation seems to be more of a structural problem. This requires identification of the

food grains to be produced based on the changes in the consumption pattern. It also makes sense to explore the possibility of increasing the supply of select protein rich commodities through improvement in productivity. And the achievement of Protein security requires adoption of appropriate agricultural policy. Further, to contain food inflation, the likely impact of FDI in multi-brand retail needs proper scrutiny. It is also essential to understand that in a growing open economy with flexible exchange rate and heavy dependence on the rest of the world to meet the domestic requirement of petrol and food, food inflation cannot be ruled out. However, to contain food inflation in the long run, policy makers need to focus on 'second green revolution'. This can improve the yield per hectare of the essential commodities consumed by the households. This necessitates use of advanced technology and private investment in agriculture (with focus on supply chains including logistics, warehousing etc.). Needless to say, adoption of appropriate food management strategy supplemented by the minimization of post-harvest losses and wastage of food grains, need to be assigned prime importance to contain food inflation.

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