ANALYSES OF THE IMPACT OF GROWTH AND PUBLIC DEBT ON FOOD INFLATION IN INDIA

P. Rajasimman*

Abstract: *This paper examines the impact of country's growth and public debt on food inflation in India. In India still more than 60% of population directly and indirectly engaged in food production and its other related food production zones. In that line agriculture is the prominent sector which provides food items for direct consumption. The crux of the study is to understand the role of two important macro variables, growth and public debt and identify how far they tries to identify their consistent influence on food inflation. Subbaroa says, "Inflation is a regressive tax and hurts the poor the most. The impact can be particularly severe in a country like India with a population of 1.2 billion, a per capita income of less than $1500 and a large share of food in the total consumption basket". By knowing the importance of this area this study divided into number of parts which starts with an introduction in the second part a brief conceptual explanation of growth, public debt and food inflation is given. In the third part, a concise review followed by analysis and its impacts. Finally, the study ends with brief challenges of food inflation and conclusion.*

Keywords: *growth, public debt, food inflation, regressive tax*

*Faculty, Dept. of Humanities, National Institute of Technology, Tirchy, Tamil Nadu.

INTRODUCTION

This paper outlines a new picture for the food inflation. It tries to show that the growth and debt shows severe impact on food inflation in India. From the period of independence food inflation shows an unimaginable fluctuation in the food prices where policymakers and administrators seem unable to bring food prices under control. This severely affects the masses and their consumption and sometimes investors' investment too. Food inflation, based on the wholesale price index (WPI) for food articles and food products, entered double digits in April 2010 and crossed the 20% level in December. This level of food inflation unacceptably high, which should be get in to the hands before it push us into peril. Growth and public debt is at increasing trend for the past five decades. This positive trend shows us two important ideology a) growth rate increases b) no increase in the real growth rate as public debt also increases. In this study we try to prove this above two ideologies also answering the question how this is going to affect food inflation?

Persistent and elevated food inflation over the last few years has emerged as a major policy concern, especially as it can potentially threaten our collective aspiration for a 'higher, inclusive and sustainable' growth. Intriguingly, we are experiencing high food inflation in the face of record production of food grains, robust buffer stocks and growing resilience of agriculture to monsoon uncertainties. Evidently, the dynamics of food inflation have changed significantly, and understanding them is obviously important for a policy response.

INFLATION

Debate is going on the causes of inflation which is full of confusion and most experts do not distinguish between long-run and short-run inflation. In fact we don't have exact definition to propound the meaning of 'Inflation'. Different academicians give their own way of meaning according to their realization. While the imbalance between demand and supply is often mentioned as an important factor, an adequate understanding of this imbalance is missing. The long-run implications of the emerging trends in food production have also received little attention. This article looks at the long and short-term changes in food prices in nominal and relative terms and examines how these changes are affected by changes in production and other factors. It also examines the effect of trade in food products on domestic prices and supply.

The term "inflation" originally referred to increases in the amount of money in circulation, and some economists still use the word in this way. However, most economists today use the term "inflation" to refer to a rise in the price level. An increase in the money supply may be called monetary inflation, to distinguish it from rising prices, which may also for clarity be called 'price inflation'. Economists generally agree that in the long run, inflation is caused by increases in the money supply.

In economics inflation is defined as the rise in general level of prices of goods and services in an economy over a period of time. When the general price level rises each unit of currency buys fewer goods and services. Consequently inflation also reflects erosion in the purchasing power of money-a loss of real value in the internal medium of exchange and unit of account in the economy.

GROWTH & PUBLIC DEBT

GDP can be determined in three ways, all of which should, in principle, give the same result. They are the product (or output) approach, the income approach, and the expenditure approach.

(i) Production approach: "Market value of all final goods and services calculated during 1 year." Net value added = gross value of output – value of intermediate consumption.

(ii) Expenditure approach: "All expenditure incurred by individuals during 1 year." *GDP =* private consumption + gross investment + government spending + (exports − imports)

(iii) Income approach: "Sum total of incomes of individuals living in a country during 1 year." GDP =rents + interest + profit + statistical adjustment (corporate income taxes, dividends, undistributed corporate profits) + wages

Public debt or public borrowing is considered to be an important source of income to the government. If revenue collected through taxes & other sources is not adequate to cover government expenditure government may resort to borrowing. Such borrowings become necessary more in times of financial crises & emergencies like war, droughts, etc.

Public debt may be raised internally or externally. Internal debt refers to public debt floated within the country, while external debt refers loans floated outside the country. Government loans are of different kinds, they may differ in respect of time of repayment, the purpose, conditions of repayment, method of covering liability. Thus the debt may be classified into following types.

(i) Productive and Unproductive debts

(ii) Voluntary and Compulsory Debt

(iii) Internal and External Debt

(iv) Short-Term, Medium-Term & Long-Term Debts

(v) Redeemable and Irredeemable Debts

(vi) Funded and Unfunded Debts

FOOD INFLATION

Inflation in general implies increase in prices of commodities resulting from demand-supply mismatch or excess of money circulation in the market. Thus food inflation can be defined as increase in the prices of food articles such as vegetables, fruits and grains (comprising of wheat, rice, pulses etc). The acceleration in food inflation and the abnormally high level of food prices towards the end of 2010 have been caused by several factors relating to a shock in supply, trade, global prices, food management, speculative activities and demand. Some of these factors are of a short-term nature and some are of a long-term nature, while some operates both in the short as well as long period.

The root cause of the food inflation in India is the demand-supply mismatch. This mismatch is triggered by a variety of factors: One, the Natural causes: Natural causes include supply and distribution side constraints and risks due to natural calamities such as unseasonal rains, floods, droughts, pests and diseases leading to devastating effect on crop and livestock. All these natural problems result in deficiency in supply. Secondly, High input costs: India is a significant importer of phosphatic and complex fertilizers and large subsidies provided to them would be unsustainable in the long run and hence inflation occurs. Another reason for rising input costs is the surge in the fuel prices which is a key input for transporting agricultural commodities to processing or consumption centres. Thirdly, the Hoarding and black marketing: Hoarding refers to the practice of creating artificial shortage in the markets in order to gain higher profits. Fourthly, absence of cold storage facilities: Cold storage facilities are required to store the yield in a hygienic and safe environment. Fifthly, Low Productivity: Because of the reluctance of farmers to use scientific techniques of farming, production still remains low. Sixthly, Penetration of corporate: The growing penetration of big corporate retailers has weakened the government's capacity to control food prices. Government has manipulated trade policies to allow corporate retailers to make huge profits through import and export of essential food items like wheat, sugar and onions and Finally, In Irrigation where the Indian farmers are largely dependent on the four-month monsoon season during which 80% of the year's total rainfall takes place.

There are two important measurements to measure inflation. They are;

(i)Wholesale Price Index (WPI) was introduced in the year 1907, which is calculated on the basis of average rate of change in the wholesale market. The Government will adopt revised WPI besides considering actual prices. Instead of current 435 commodities, the revised WPI will have 980 commodities included in it. This will be rationalized by incorporating new items, removing unimportant items and amalgamating similar items. The base year will be revised to 2004-05 from the current base year of 1993-94. This new wholesale price index would give a more accurate figure for inflation.

(ii)Commodity Price Index (CPI) is a statistical time series value based on the weighted average rate of change in prices of a set of goods and services purchased by consumer. CPI is more comprehensive and it catches the inflation value from the end consumer side rather than from wholesale side. CPI is based on monthly basis. India uses CPI, which most developed countries use CPI calculations for inflation rate. Economists say that India should adopt CPI for inflation calculation as it is the one that shows price rise that end consumers would experience

In most countries, the Consumer Price Index is the most widely understood and recognised measure of inflation. It is available relatively frequently, and it is typically not subject to revisions. The overall CPI is meant to represent the cost of a representative basket of goods and services consumed by an average urban/rural household.

In most countries, a Producer Price Index' (PPI) is also reported. While PPIs record the price change from the perspective of the seller, CPIs measure price change from the purchaser's perspective. Sellers and purchasers prices changes due to government subsidies, sales and excise taxes, and distribution costs. This distinction, used internationally, between the PPI and the CPI is considerably unlike the Indian distinction between the WPI and the CPI.

REVIEW

Duvvuri Subbarao (2011) keen on inclusive growth says as follows, "unlike the growth-inflation trade off, the possible trade off between inclusive growth and inflation has not received much attention. The need for making growth inclusive is incontestable, but it is important to recognise that policies aimed at inclusion can stoke inflationary pressures, at any rate in the short-term". He mentions two examples first, the significant increase in rural wages triggered by the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), and second, inflationary implications of the proposed Food Security Bill.

Chand, Ramesh (2001) brings the importance of this study are by mentioning "for a country like India, stable growth in output is as important as the level of growth. Fluctuations in growth cause serious disruption in supply and result in frequent imbalances and bouts of inflation. Food storage capacity in the country is very low and the quality of storage infrastructure is not suitable for keeping food beyond a few months. This is particularly true for semi-perishable and perishable foods. Because of this, much of the growth during a year of bumper production cannot be carried over to meet a shortfall in production in the next season. Therefore, from an inflation point of view, smooth growth is essential and indeed much more important than high and fluctuating growth".

Sukhpal Singh (2011) clearly explains with an empirical study that, FDI in retail business are not going to control food inflation. This is only because government with the mind to increase growth numbers. But the discussion of the implications of supermarket food chains for prices and poor consumers reveals that there is no direct correspondence between modern retailers and lower food prices and therefore modern retail does not contribute to better food security of the poor consumers. It is all about buying and selling power of the supermarkets that prices are delivered in a certain way both to the supplying farmers and the buying consumers. Therefore, the inflation containment logic for FDI in food retail and entry of modern supermarket chains does not stand up to scrutiny given the empirical evidence from across the globe.

Sthanu R Nair, Leena Mary Eapen, (2012) This paper analyses the causes of the high inflation experienced in 12 food commodities between January 2008 and July 2010. It is shown that a majority of the commodities were subject to inflationary pressures due to domestic supply-side constraints. Developments in the global economy have influenced the domestic food prices mainly through passing on world oil price increases. High cost food imports played only a very limited role.

ANALYSIS

If growth is the key measure of macroeconomic performance, inflation (or rather its absence) is the generally preferred indicator of macroeconomic stability. As Table 1 show, the evolution of inflation during the last decade. It is also instructive to split the decade into two five-year periods. The first noteworthy point is that inflation was in double digits in the first half of the decade according to all three indices. Even if the crisis year of 1991/92 is excluded, inflation averaged close to 10 per cent in the next four years according to all three indicators. Second, the rate of inflation clearly decelerated in the second half of the decade according to all three measures. Going by the usual measure of inflation, the WPI, the rate was halved down to 5 per cent in 2004.

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Table 1 shows increase in the GDP at real prices is followed by increase in public debt. This ultimately affects inflation deflator on both consumer prices and wholesale prices which is reflected in the annual rate of inflation. Though, the same trend is seen from the beginning of 1991 crisis period. The study deals only from the year 2000-2010 of ten year period.

As with economic growth, inflation is a multi-causal phenomenon, which defies simple explanations. The balance of payments crisis of 1991 and attendant severe restrictions on imports disrupted industrial production. Coupled with a bad year in agriculture these supply problems propelled inflation to nearly 14 per cent in 1991/92. Inflation moderated in the beginning of 2000 as the stabilization programme took hold and confidence in macro management was restored. But this picture has completely changed in the middle and later period of 2000. In 2000/01 the major increases in petroleum prices were the main culprit. The relatively low inflation in the first half of the decade also reflected two other factors: mostly moderate increases in money supply and, more worryingly, the apparent slack in autonomous investment demand. Again it has increase incredibly high as we fear for control in the monetary policy.

TABLE 1 – COMPARISON OF GROWTH, PUBLIC DEBT, WPI, CPI AND ANNUAL INFLATION

Year	GDP at Real Price	Public Debt	WPI Base 1993-94	Average consumer prices	Annual rate of inflation (%)
2000	4.3	11.7	145.3	3.9	3.3
2001	5.5	9.3	155.7	3.7	7.2
2002	4.0	8.9	161.3	4.5	3.6
2003	8.1	7.7	166.8	3.7	3.4
2004	7.0	13.8	175.9	3.9	5.5
2005	9.5	7.9	187.3	4.0	6.5
2006	9.6	14.2	195.5	6.3	4.4
2007	9.3	17.4	206.1	6.4	5.4
2008	6.7	17.2	215.9	8.3	4.8
2009	8.4	10.9	233.9	10.9	8.3
2010	8.4	15	242.9	12.0	3.8

Source: Reserve Bank of India, various publications

Table 1 provides the annual rate of inflation of whole sale price index (WPI) for the period 2000 to 2010. In the year 2000-01, it was 145.3, but it never exhibited such a large value in the succeeding years. It may be partly due to the reform measures and partly because of RBI's effective control over the monetary aggregates of the economy and the banking system. Whenever there had been an increasing tendency in the inflationary rates, the monetary authority had taken effective steps to cut off the rates through proper measures. By analyzing the table, we can observe the effectiveness of monetary measures over the inflation throughout the years. In 1999-2000 and in 2002-03, it was as low as 3.3%and 3.4% respectively. In the first quarter of the last financial year (2009-10), it was passing through with a negative value (for few weeks). This could be considered partly as an after effect of the global financial crisis. Inflation declined marginally to 8.3 per cent in 2009 to 3.8 per cent in 2010 even though prices of food items like rice, wheat pulses and potato showed a rising trend, so it is clear food inflation is greater than the inflation. The rising prices of food products, manufacturing products, and essential commodities have pushed inflation rate further in India.

There is a continuous increase in the prices of food items in India since 2005. The key reason cited for the spiralling food price inflation is the bad monsoon in India. Indian Agriculture is said to be a Gamble with Monsoon. The Indian farmers are largely dependent on the four-month monsoon season during which 80% of the year's total rainfall takes place. The reason is that 60% of the country's total cropped area is not irrigated. High food inflation pressurises the consumers that they have to cut back on their spending (on non-necessary items). This in turn will impact the consumption part of the GDP growth. Finally the trend which shows the relationship of tries indicators GDP, Public Debt and Food inflation is increasing with much greater direction. This proves that the positive side of these indicators are affected by the following way, such as introducing of social programmes expenditure to control the high inflation by the government are shown in a negative reaction by all the side of the growth which affect to public debt in India.

The study finds that domestic debt and domestic debt servicing increase price level in India. In the WPI function, the volume of domestic debt has positive and significant effect on price level. The effect of domestic debt servicing on price level is also positive and it is statistically significant. Moreover cost of domestic borrowing is a huge burden on budget and to finance budget deficit government has to resort to different sources and deficit financing leads to decrease in value of currency, ultimately creates inflation. Government must come up with policies and structural reforms to increase the revenue and lower its current expenditure. The rise in public debt in India is attributed to government extra budgetary activities which most often are not used for the proposed project. Commitment to budget should be encouraged for fiscal discipline on the part of the government and its agencies.

MEASURES

After understanding how far India's growth and public debt affects food inflation. It is very important for us to know the different measures (solutions) face food inflation. At most these following measures help us to overcome the problems in controlling food inflation.

(i) Raise Agricultural Productivity

(ii) Rethink Price Policy Interventions

(iii) Improve Supply Chain Management

(iv) Manage Competition for Land from Nonfarm Activities

(v) Cold Storage Facilities

(vi) Control on fuel prices

(vii) Curbing corporate traders

(viii) Pooling investment resources

(ix) Food Security Act

(x) State Intervention

Though these measures are not directly engaged with the growth and public debt. They have immense side effects on reducing public debt followed by food inflation. So, government should concentrate not only on quantitative growth but also on qualitative (welfare) growth which ultimately controls food inflation on one side and the same time it reduces huge public debt.

CONCLUSION

This study attempts to add a new perspective that the influence of country's growth and public debt on food inflation is positive and severe. In other words, government interest to increase growth rate by increasing the public debt, severely affects the food inflation. A positive trend is observed on all the three variables where one indicator lead to increase in the other indicator. If this trend is going to be continued, sure food inflation pulls the performance of the whole economy. It is good if proper measures are taken at the best earliest to overcome the problem in the near future.

Some important measures which are highlighted in the study help the country to overcome the negative impact. Some measures like shifting the measurement from WPI(believed as a unscientific method due to its failure to measure real effect) to CPI, Increasing productivity, Cold Storage Facilities, Control on fuel prices, Curbing corporate traders, Pooling investment resources, Food Security Act, State Intervention. Government has to think of qualitative (welfare) growth, instead of quantitative growth rate. By reducing its public debt (very high in the recent periods) country can attain a stable position.

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