



Article

Food price inflation in India: The growing economy with sluggish agriculture



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ABSTRACT

India is experiencing high rate of economic growth in the last two decades but the growth has been coupled with high rate of food price inflation. The growth has been very uneven across sectors with agriculture remaining very sluggish. The increase in per capita income has significantly increased the demand for food but agricultural production has failed to keep pace with the growing demand. The theoretical explanations and time series econometric results establish that increase in per capita income and shortage in supply are responsible for price rise. There is no long run relationship between money supply and agricultural price. Increasing public expenditure and unfavorable foreign exchange rate have some effects on price although the results are not robust.

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Inflación de los precios de los alimentos en India: crecimiento económico y letargo agrícola

RESUMEN

India está experimentando un elevado índice de crecimiento económico en las últimas dos décadas, aunque dicho crecimiento ha ido acompañado de una elevada tasa de inflación de los precios de los alimentos. Este aumento se mostró bastante desigual entre los diferentes sectores, siendo muy lento en el sector agrícola. El incremento de la renta per cápita ha elevado considerablemente la demanda de alimentos, pero la producción agrícola no ha seguido el ritmo del crecimiento de la demanda. Las explicaciones teóricas y los resultados econométricos de las series de tiempo establecen que el incremento de la renta per cápita y la escasez de los suministros son los causantes del alza en los precios. No existe una relación a largo plazo entre el suministro dinerario y los precios agrícolas. El aumento del gasto público y las tasas poco favorables del cambio de divisas tienen ciertos efectos sobre los precios, aunque los resultados no son sólidos.

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Crecimiento de la demanda
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1. Introduction

India is experiencing high rate of GDP growth in the last two decades although the growth remains very uneven across sectors. The GDP is growing at a rate of 7–9% on an average per annum, but in agriculture the annual average growth rate is only 1.5%

during this period. The share of agriculture in GDP has declined to less than 15%, although more than 50% of the population of the country is still dependent on agriculture for their livelihood. Like in many other developing countries the economic growth in India has been coupled with high rate of inflation. A major economic challenge the country is facing in the recent years is high food price inflation. From January 2008 to July 2010, the food price inflation rate year-on-year basis was recorded 10.20% (Nair & Eapen, 2012). From October 2009 to March 2010 food price inflation announced every week hovered around 20% (Basu, 2011). The researchers have tried to explain this price rise in terms of various factors including the effect of food crisis in the international market in the recent time (Gulati & Saini, 2013; Basu, 2011; Nair & Eapen, 2012). The Study of Robles (2011) shows that there is evidence of positive transmission effects of international prices on domestic agricultural markets in Asian and Latin American countries. Similar view has been expressed by Carrasco and Mukhopadhyay (2012). Baltzer (2013) however, notes that not all countries are equally hit by global food crisis. He states that in several countries, domestic prices are largely unrelated to international prices and reflect purely local shocks such as harvest failures, political turmoil etc. This study also finds that there is a close relationship between international and domestic prices in Brazil and South Africa, but the price pass-through from international to domestic market in China and India is almost nil. The level of transmission of international prices to domestic prices depends on a country's dependence on imports of food items and the inputs used in agricultural production. But India's dependence on the imports of agricultural products is not high except certain items like edible oils, sugar and pulses. In fact, India is a net exporter of food grains for the last thirty years although India's dependence on the import of petroleum and petro products including fertilizers is really very high. The management food economy and government intervention into the market for food grains through procurement and public distribution to maintain stability of food prices is an important issue in the present context. A sizeable buffer stock of food grains is maintained in India through public procurement to iron out the price fluctuations arising out of seasonal and sudden supply shocks especially in the years of crop failure. But Basu (2011) has shown that, the release of food grains was inadequate in the time of price rise although the food reserve in the country was above normal limit. So, the management of food economy was not up to the mark.

Like the price of any other commodity, agricultural price is also a market outcome and demand and supply in the market play an important role in the determination of price. The market imperfection can create distortion in the functioning of the market and influence price by controlling supply. A typical agricultural marketing channel is: Farmer – Local assembler – Central wholesaler – Retailer – Consumer. The retail prices are determined nearly in a perfectly competitive market situation. However, a few traders dominate in the wholesale market both as buyers and sellers. They act as both oligopolists and oligopsonists at the bottleneck of the marketing process (Nicholls, 1955; Sasmal, 2003). In the study of Osborne (2005) in the context of Ethiopia it is found that there are general forms of imperfect competition among rural wholesale traders, although there is no conclusive evidence of imperfect competition among the traders in larger and more centrally located markets. Anyway, the market imperfection can influence the price temporarily but it cannot sustain price rise for a long period if there is no actual shortage. There may be seasonal variation also in the prices of agricultural commodities. According to Sarkar (1993), prices are low in harvest season and high in lean season. Therefore, it is finally the supply and demand which are the most important determinants of agricultural price. The supply is related to agricultural production. In sluggish agriculture in a country like India, the productivity is stagnant or increasing at a declining

rate due to various reasons like resource degradation, decline in public investment and technological bottlenecks (Sasmal, 2012; Bhullar & Sidhu, 2006; Mani, Bhalachandran & Pandit, 2011). But the demand for food items is increasing at a very high rate following a steady increase in per capita income. Higher disposable income has not only significantly increased the overall demand for agricultural commodities but also changed the pattern of consumption. Gulati and Saini (2013) have shown that the pressure on prices is more on protein foods like pulses, milk and milk products, egg, fish and meat and vegetables indicating the shift in consumption pattern from cereal based diets to protein based diets due to rise in income. There has been nearly threefold increase of per capita income (at constant prices) in India in the last two decades and poverty has declined from 45% in 1993-94 to 22% in 2011-12 (Source: Planning Commission Government of India, 2013). The overall demand has been further magnified by huge public expenditure of the government on a number of welfare schemes like rural employment, food security of the poor, subsidies, pension and various allowances. A lion's share of this expenditure is spent on unproductive and less productive heads. This has increased demand significantly without making much contribution to supply. Naturally, there has been a mismatch between the growing demand and the actual production. The supply response studies in agriculture explain that just increase in price cannot raise production. Adequate infrastructure, proper technology and various supporting factors are necessary for higher production (Nerlove, 1958; Schultz, 1964; Mellor, 1966; Raj Krishna, 1963; Narain, 1965; Feder, 1980). Again, many of these facilities are of public good nature and they are provided by the government. But net public investment in agriculture has declined in India in the recent past (Mani et al., 2011). The Granger causality analysis in Gilbert (2010) has established the role of demand growth, monetary expansion and exchange rate movements in explaining price movements over time. The econometric results of Saghian, Reed and Merchant (2002), however, indicate that agricultural prices adjust faster than industrial prices to shocks in the supply of money affecting short run relative prices but long run neutrality of money does not hold.

The objective of this paper is to analyze the nature and extent of food inflation in India in the last two decades and investigate into the factors behind the price rise. The main query of this study is to see to what extent the growing demand for agricultural commodities in a booming economy with sluggish agriculture can explain the food price inflation in a country like India. The paper has been arranged as follows: Section I introduces the matter, Section II presents a theoretical framework for explaining the price rise of food grains in a two-sector general equilibrium model. Section III provides empirical evidences and econometric results. Section IV gives the summary and policy implications.

2. Theoretical framework

2.1. Agricultural price in a two-sector general equilibrium model

One important feature of agricultural price is that it exhibits sharp fluctuations over time compared to non-agricultural prices. This is because in agricultural production supply can not immediately adjust itself with the changes in demand. Moreover, the elasticity of demand for most of the agricultural products is so low that a small change in supply with demand remaining constant or a small change in demand with supply remaining unchanged causes a large change in price.

In this section, a theoretical framework of food price inflation has been constructed by using the framework of specific factor model of international trade developed by Jones (1971) and Jones

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