A STUDY ON ECONOMIC REFORMS AND ITS IMPACT ON FOOD INFLATION IN INDIA

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ABSTRACT

Liberalization Privatization and Globalization(LPG) is the Economic reform needed in India and in the year 1991 these reforms change the whole scenario of Indian Economy and it boost Indian Economy. Persistently high food inflation has been a major contributor to India's extended era of high inflation over the previous decade. India's economy has grown rapidly over the past two decades, but this expansion has been accompanied by rapid inflation in the cost of staple foods. Even while the economy as a whole has been expanding, agriculture's expansion has been painfully slow. The rising demand for food is directly correlated to rising incomes, but agricultural output has not kept pace with this trend. Theoretical justifications and time series econometric findings both point to increases in per capita income and a lack of supplies as the root causes of the upward trend in prices. The expansion of the money supply has little effect on agricultural prices in the long run. There is some influence on pricing from rising government spending and an unfavourable foreign currency rate, however the results are not very strong.

Keywords:- Inflation, Economic reforms, Economy, Agriculture

INTRODUCTION

Since the introduction of economic reforms1 in India, the country's agricultural production and crop yields have slowed (Bhalla and Singh 2009; Desai et al 2011). In the backdrop of India's chronically high food price inflation during the last several years, it was stated that the sluggish expansion of Indian agriculture in the Post-Economic Reform period was at the base of the supply constraint producing high food prices (Carrasco and Mukhopadhyay 2012; Desai et al 2011; GoI 2012). Nonetheless, a coherent picture of the food price situation post-economic-reform period-wide and its link to the deceleration of agricultural expansion during this time period has yet to emerge. To better understand food pricing behaviour during the Post-Economic Reform era, which has been a time of sluggish agricultural expansion, this study will analyse the patterns in food price inflation in India in connection to the growth of Indian agriculture before and after the Economic Reform. Bhalla (2007), Bhalla and Singh (2009), and Panagariya (2004) categorise the development of India's agricultural sector into four distinct eras: pre-Green Revolution (from 1950–1951), Green Revolution (from 1967–1980), Green Revolution (from 1980–1992), and post–economic reform (from 1992–present) (1992–93 to 2012–13). The rise of agricultural GDP and food production in India analysed throughout different agrarian policy eras. Food inflation patterns as measured by the wholesale pricing index (WPI) are explored over eras of agricultural policy. Using yearly data and a panel

regression model, we examine how the increase in procurement costs affects the wholesale cost of a number of different food commodities in order to get a sense of how much of an impact certain government policies have on food inflation. Finally, the degree to which food inflation spreads to other categories and to the overall rate of inflation is assessed.

REVIEW OF LITERATURE

It's not only India that saw a spike in food costs between 2006 and 2013. Inflation for food in the world averaged 32.1% per month between November 2006 and August 2008, and 30.7% per month between October 2010 and August 2011. Food prices have been affected by a number of different causes of cost inflation. Cost of production has increased due to substantial rise in agricultural salaries since 2008. (Gulati et al., 2013). While Minimum Support Prices (MSP) and an index of agricultural input both contribute to food price increases, Sonna et al. (2014) indicate that rural salaries have a greater influence. 3 Increases in the price of fertiliser and transportation were also a result of deregulation of administered fuel prices (Bandara, 2013).

Multiple analyses have pointed to MSP hikes as a major cause of price rises. According to Mishra and Roy (2012), the MSP has to be higher than the price at which a good or service can be procured at a given level of demand. Inflationary pressures may be triggered by a rise in MSP of any amount. The favourable impact of MSP on food inflation is further supported by Gaiha and Kulkarni (2005), Sonna et al. (2014), and Bhalla et al. (2011).

Several gaps in the literature are filled by this work. While other variables, such as demand from the non-agricultural sector and agricultural salaries, have been studied in the past, we first conduct an empirical investigation into the influence that factors like global pricing and fuel costs have in affecting local food prices.

OBJECTIVES OF THE STUDY

Research objectives are the base and purpose of any research. As per this research work is kept in mins the following research objectives are framed

- To investigate the factors influencing food inflation in India.
- To study the impact of economic reforms in food inflztion.

ANALYSIS & INTERPRETATION

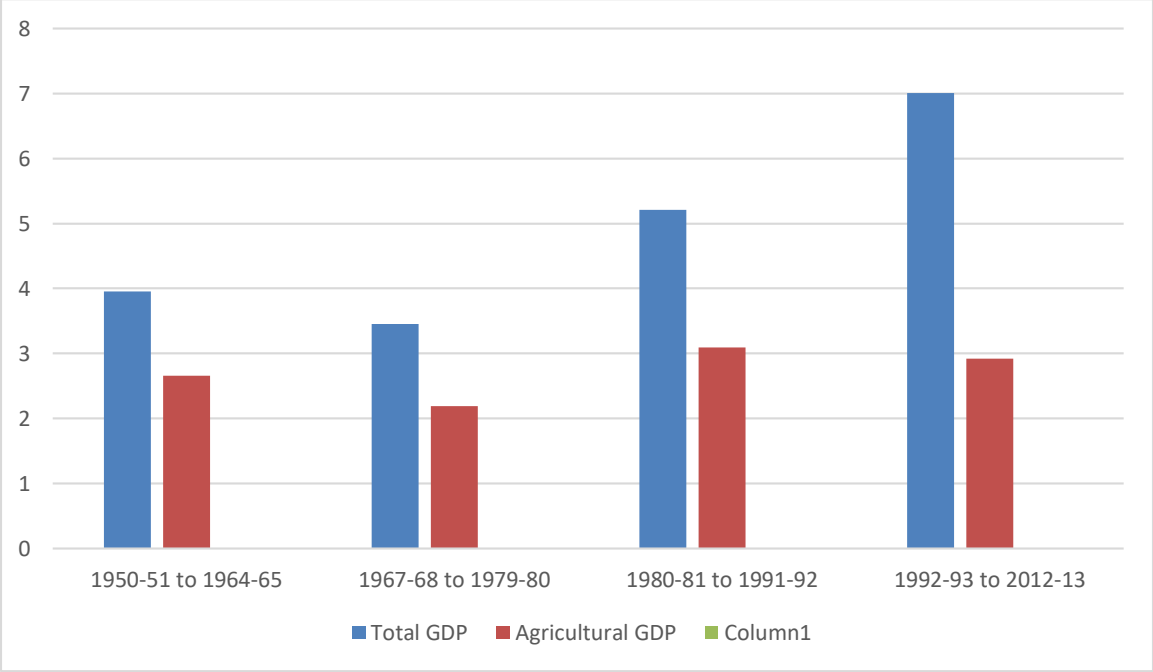
The Mature Years (1980–1981): In the 1980s, India's agricultural sector saw growth as a result of widespread adoption of the high-yield variety (HYV) seed and fertiliser approach over an expanding range of crop types and almost the whole country. Between 1980–1981, the growth rate of agricultural GDP, production, and yield of a majority of crops improved, marking a transition from the first stage to the second stage of the Green Revolution (Table 1 and 2). The agriculture sector's contribution to GDP growth during this time period was the largest on record, at 3.09% each year. Yield's ascent to prominence as the leading driver of total food-output increase is another major breakthrough.

Table1: Compound Annual Growth Rates of Gross Domestic Product (GDP) and Agricultural GDP (Base:2004-05)

Period	Total GDP	Agricultural GDP
1950-1951 to 1964-1965	3.95	2.66
1967-1968 to 1979-1980	3.45	2.19
1980-1981 to 1991-1992	5.21	3.09
1992-1993 to 2012-2013	7.01	2.92

Data for 2010-2011 are second revised estimates (:RE), for 2011-2012 are first RE and for 2012-13 are provisional.

Source: Handbook of Statics an Indian Economy (HSIE) 2012-13, Reserve Bank of India(RBI).



Shift in Food Consumption: During the maturing stage of the Green Revolution in India, a "secular shift" in food consumption pattern favouring high-value food items was observed, as determined by an analysis of food expenditure patterns at current prices based on the household con summer expenditure survey conducted by the National Sample Survey Office (NSSO) on a quinquennial basis (1967–1968 to 1993–1994). (1983 to 1994). The following three tendencies, taken from Tables 8 and 9, provide evidence of this (p 57). To begin, the decline in the expenditure share 16 of cereals in both rural and urban India during 1983–88 was not only greater than in other periods but also reached historic highs. Second, between 1983 and 1994, the highest share of total food expenditures was found for high-value commodities in both rural and urban areas. Third, from 1983 to 1994, pulses, milk, sugar, edible oil, vegetables, and fruits saw the greatest percentage-point increase in expenditure shares across all of rural India. These tendencies indicate that the historically high average food price inflation rate recorded during the maturing stage of the green revolution had important contributors, including the increasing demand for high-value agriculture products. Figure 3 reflects this trend perfectly by showing that high-value food commodities, such as protein foods, fruits, and vegetables, have become a much larger contributor to overall food inflation since the Green Revolution's maturing stage, as compared to the initial stage.

There may be two factors at play in the shifting food consumption pattern seen throughout the Green Revolution's mature phase. First, the literature on India's economic development shows that, following a period of slow and flat growth in the first three decades after independence, the Indian economy developed at a striking pace in the 1980s (De Long 2003; Nagaraj

2000; Panagariya 2004; Rodrik and Subramanian 2008). This seems to have prompted the first significant shift in Indian dietary habits since independence. Second, the rural population's increased purchasing power throughout the 1980s may have contributed to a higher demand for expensive foods. During the Green Revolution's middle phase, real agricultural wages grew at their fastest rate. Real earnings for male agricultural workers, for example, increased by 3.75 percent between 1983 and 1993-94 but by just 1.33 percent and 0.59 percent from 1993-94 to 1999-2000 and 1999-2000 to 2010-11, respectively (Himanshu 2005 and Usami 2012). Real agricultural wage growth was modest even before the Green Revolution's middle phase (1964-1980), as shown by Chavan and Bedamatta's research (2006).

Table 2: Average Inflation Rate (Base: 2004-05) during Various Episodes of Food Products Price Inflation

Period	Duration (in months)	Inflation Rate (%)
Initial stage of Green Revolution (1972-73 to 1979-80)April 1972 to June 1975	39	15.00
December 1976 to June 1977	7	18.31
April 1979 to June 1981	27	37.72
Overall period (April 1972 to June 1981)	-	12.57
Maturing stage of Green Revolution (1980-81 to 1991-92)April 1983 to August 1984	17	10.57
February 1986 to October 1988	33	8.68
April 1989 to March 1993@	48	10.86
Overall period (July 1981 to March 1993)	-	7.24
Post-economic reforms period (1992-93 to 2012-13) April 1993 to March 1995	24	12.20
December 1996 to March 1999	28	9.46
March 2003 to January 2005	23	7.29
January 2008 to July 2010	31	10.20
April 2011 to March 2013	24	7.64
Overall period (April 1993 to March 2013)	-	5.94

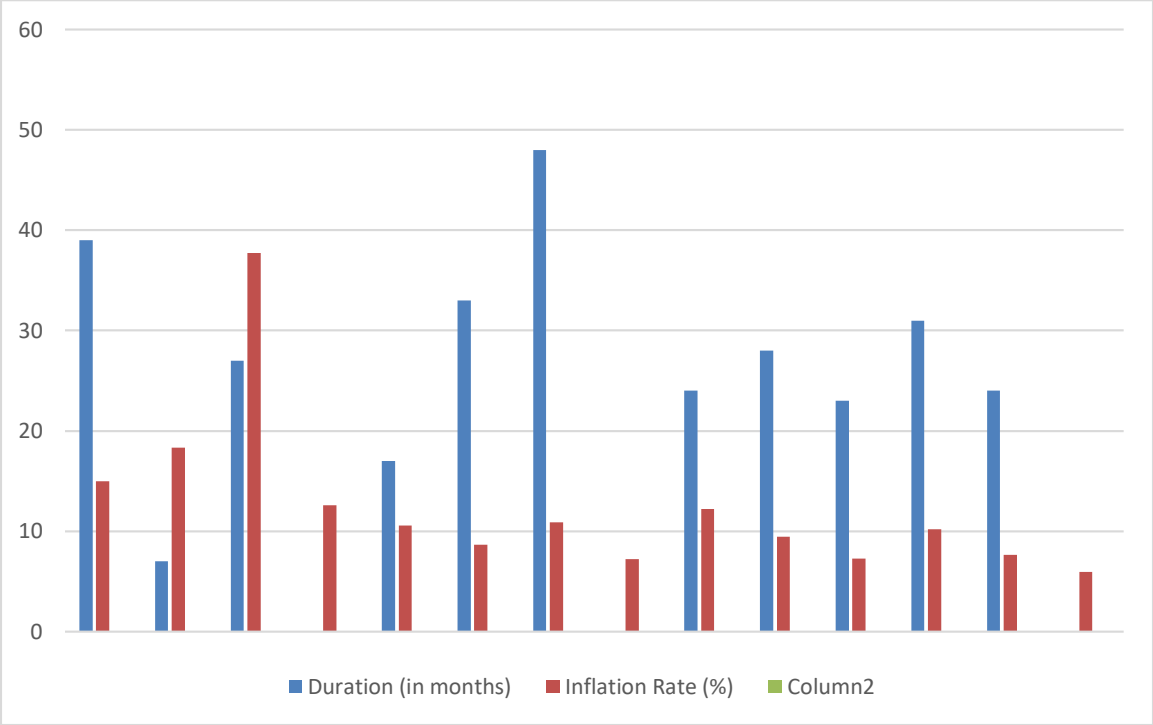


Table No. 3: Factors Contributing to Various Episodes of High Food Inflation in India

Inflationary Episodes	Reason for High Inflation
June 1972 to May 1975 (food articles) and April 1972 to June 1975 (food products)	Crop loss in 1971 due to flood situation, in 1972 due to drought and in 1974; uncertainty caused by the 1971 Indo-Pak war; additional demand for food due to influx of Bangladesh refugees resulting from 1971 Indo-Pak war; successive increases in the procurement price higher central issue prices; absence of a robust system of government procurement. buffer stocking and public distribution; delay in importing food; panic situation created by the dwindling foreign exchange reserves, stoppage of concessional food imports using soft loans; and speculative behaviour by traders.
February 1977 to January 1978 (food articles), December 1976 to June 1977 and April 1979 to June 1981 (food products)	Excess liquidity in the agricultural and trading sectors leading to bullishness in the grain market; short-fall in rice production due to scanty rain during 1976 kharif season; severe drought situation in 1979-80 leading

	to sharp drop in foodgrains production and cornering of large quantities of market arrivals by private traders.
July 1979 to August 1984 (food articles) and April 1983 to August 1984 (food products)	Short-fall/unimpressive growth in foodgrains production during 1979-80, 1981-82 and 1982-83; drought during the kharif season of 1982-83; self-imposed limits on open market purchases by government; inadequate spread of public distribution system; limited food imports due to difficult foreign exchange situation; depletion of buffer stock; and high support prices
April 1986 to February 1989 (food articles) and February 1986 to October 1988 (food products)	Short-fall/unimpressive growth in foodgrains production during 1984-85, 1985-86, 1986-87 and 1987-88; higher support prices; drought situation in 1987-88; and low foodgrains procurement in 1988-89 despite record production
April 1990 to February 1993, June 1994 to April 1997, May 1998 to April 1999 (food articles), April 1989 to March 1995 and December 1996 to March 1999 (food products)	Short-fall/unimpressive growth in foodgrains production during 1989-90, 1990-91, 1991-92, 1993-94, 1995-96, and 1997-98; large government procurement at high support prices; large increases in the issue price of foodgrains; more export of wheat and rice; and increase in speculative hoarding by private traders due to withdrawal of monitoring of stock limits under Essential Commodities Act and RBI's decision to exempt almost all commodities from selective credit controls effective from 21 October 1996.
October 2005 to September 2007 (food articles)	Short-fall/unimpressive growth in foodgrains production during 2004-05 and 2005-06: higher aggregate demand; and government's failure to procure adequate quantities of wheat

March 2008 to March 2013 (Food articles), January 2008 to July 2010 and April 2011 to March 2013 (food products)	Supply-side bottlenecks; large increase in minimum support prices; inadequate sale of rice under open market sales window of government; inflationary expectations due to unfavourable climatic condition; increasing demand for food due to an increase in income, increase in cost of production; and high cost of imports and higher food exports.

Source: Economic & Political Weekly (Analysis and Editorials published in various issues):

Nair and Eapen (2011 and 2012); Nair (2013); Patnaik (2007) and the authors' examination of year-on-year rise of output of major food items.

Role of Minimum Support Prices: One of the primary factors ascribed to the hikes in food prices experienced during the post-ERS era are the significant increases in minimum support prices (MSP) of foodgrains (rice and wheat) (Balakrishnan 2000; Chand 2005; Dev and Rao 2010). (Balakrishnan 2000; Chand 2005; Dev and Rao 2010). The buying of foodgrains by the government at high er MSP might produce significant food inflation owing to three causes (Gol 2000; Nair and Eapen 2011). (Gol 2000; Nair and Eapen 2011). First, it provides a higher baseline for market pricing of foodgrains so feeding into food price inflation expectations. Second, it implies a raise in the prices of foodgrains given by the government via the public distribution system (PDS) and Open Market Sale Scheme (OMSS) (OMSS). Third, it edges out private commerce so limiting the amount of foodgrains accessible for consumption by regular consumers. The influence of a hike in MSP on foodgrain prices is evident from Figures 4 and 5 (p 55) which show that generally, the rate of annual increases in MSP of rice and wheat and their respective annual inflation rates move in the same direction, indicating that a higher increase in the MSP translates into an increase in the market price of foodgrains and vice versa. Long-term trends demonstrate that MSP for rice and wheat in nominal terms saw substantially larger growth throughout the current period than in the 1980s (Figure 6, p 55). (Figure 6, p 55). Interestingly, however, cereals saw lower average inflation rates throughout the post-ERS period compared to the mature stage of the Green Revolution (Table 6). (Table 6). We propose the following rationale for this counter-intuitive observation.

Overall, though, the MSP increased substantially during the post-ERS period, a closer look at the annual increases in MSP reveals that between the five-year period from 2001-02 to 2005-06 in case of wheat and from 2002-03 to 2006-07 in case of rice the increase in MSP was moderate (circled portion in Figures 4 and 5). (circled portion in Figures 4 and 5). The yearly gains in MSP throughout these years varied from 1.56% to 1.64% for wheat and 1.75% to 3.77% for rice. 22 Both preceding to and after these times in theposters era, yearly gains in MSP were substantially bigger. For instance, from 1993-94 to 2001-02 (2000-01 in case of wheat) the yearly increases in MSP ranged from 3.92% to 14.81%, and 2.86% to 25.39% for rice and wheat, respectively. Interestingly, throughout this decade of mild rises in MSP, inflationrates of both rice and wheat were very low with a period average of 2.1% and 1.9%, respectively (circled part in Figures 4 and 5). (circled portion in Figures 4 and 5). Incidentally, it is this very lengthy time of considerably low rice and wheat inflation rates which has driven down the average grain inflation rate following the economic reforms.

Apart from the modest increases in MSP, which might have reduced the expectation of an all pervasive increase in food prices, the other reason for low rice and wheat price inflation between 2001-02 and 2006-07 appears to be the reduction followed by no revision in Central Issue Price (CIP) of rice and wheat since July 2000 for below poverty line (BPL) families, and since July 2001-02 for above poverty line (APL) families (p 57). The combined impact of the minor increases in MSP, and decrease and no upward.revision in the CIP are the following: (a) starting from 2000-01, the government's food subsidy bill increased substantially both in absolute terms and as a percentage of GDP (at market prices) p 56), (b) the offtake of rice and wheat both by BPL and APL beneficiaries under targeted public distribution system (TPDS) increased between 2001 and 2007 Thus, it is obvious that the mild rises in procurement costs. period 2001-02 to 2006-07 combined with decrease in and freeze on PDS rates resulted in a decline in wholesale price of cereals and rise in offtake of cereals from PDS and open market. Although increasing offtake led to significant declines in foodgrains buffer stockpiles between 2002-03 and 2006-07 (Figure 8, p 56), consumers paid lower prices for cereals owing to minor increases in MSP and downward/no adjustment in CIP.

In sharp contrast to the situation during 2001 to 2007, between the period 1993-94 and 1999-2000 (2000-01 in case of wheat) annual increases in MSP were substantial (Figures 4 and 5).during this period (Figure 8, p 56) thanks to high levels of procurement, it not translated into lower cereal prices for most years due to (a) procurement at higher MSP, and (b) increase in CIP at frequent intervals. In fact, the upward revision of CIP has accelerated the rate of accretion to public stocks of foodgrains, particularly in case of wheat during 1997-2001, by way of reducing the offtake of grains under the PDS.

As regards the other important phase (2007 to 2012) of high MSP prevailing during the post-ERS period to overcome the situation of falling foodgrain stock from 2002-03 to 2006-07 and to incentivise farmers to increase grain production and productivity (GoI 2012) a sharp hike in MSP of rice and wheat was effected from 2007-08 and2007-08 and 2006-07, respectively. As a consequence, cereal prices soared despite growing grain buffer stock. 28 However, as CIP remained unrevised throughout this time consequently extending the disparity between CIP and the market price of grains, the off take of food grains under TPDS, even by APL recipients, was high.

Finally, examining the mature stage of GR, despite in absolute terms the nominal MSP of rice and wheat was lower throughout this era than the post-ERS period, a dramatic change in the level of nominal MSP happened from 1988-89 (circled part in Figure 6). (circled portion in Figure 6). The average MSP provided to rice climbed from Rs 131 from 1980-81 to 1987-88 to Rs 210 during 1988-89 to 1992-93, a considerable gain of 60%. The MSP of wheat likewise climbed to a comparable extent from Rs 154 to Rs 247 over the same time. More notably, the CIP of both rice and wheat was amenable to upward modification during the ripening condition of Green Revolution. Thus, it turns out that the high level of MSP in the latter portion of the mature period of the Green Revolution and upward changes in the PDS issue price at regular intervals have placed pressure on cereal prices. could have contributed to decreased food inflation during the post-ERS era by strengthening the government's capacity to stabilise prices via sale of food grains to the open market. Another closely related element might be the improvement in coverage and effective- ness of the PDS overtime. Though the PDS played a significant role since independence in making

accessible foodgrains to customers at acceptable price, it remained largely urban and ineffectual in reaching the poor until the mid-1980s (Howes and Jha 1992; Nawani 1994). (Howes and Jha 1992; Nawani 1994). However, beginning from the early 1990s, major pol- icy interventions such as re- vamped PDS and TPDS were implemented to assure the effective reach of PDS to the historically deficiency regions and vulnerable populations (GOI 2005; Nawani 1994). (GOI 2005; Nawani 1994). Recent studies have revealed that PDS has improved gradually in terms of coverage and function (Khera 2011; Rahman 2014). (Khera 2011; Rahman 2014).

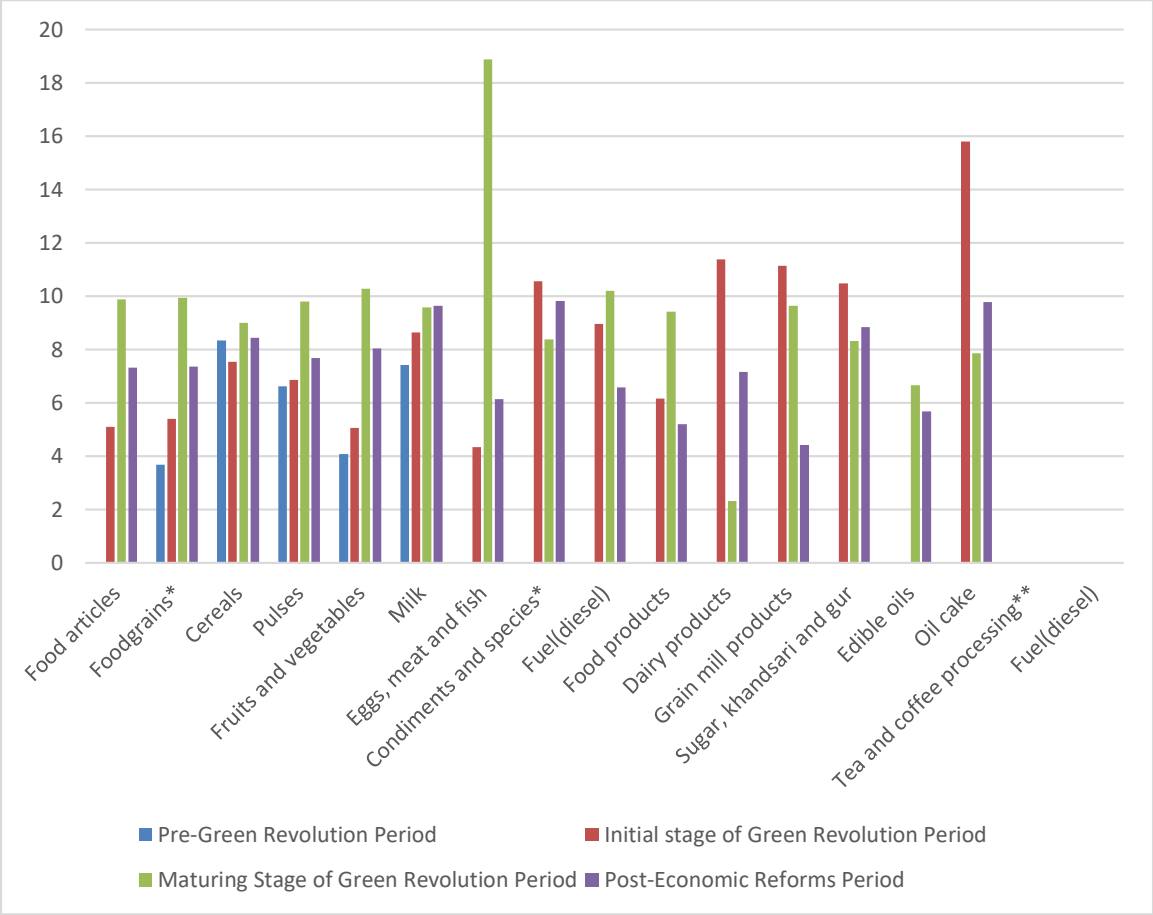
Table No. 4: Average WPI Inflation Rate (Base: 2004-05) of Diesel and Subgroups of Food Articles and Food Products under Various Agrarian Policy Regimes

Items	Pre-Green Revolution Period	Begining stage of Green Revolution Period	Maturity Stage of Green Revolution Period	Post-Economic Reforms Period
Food articles Food grains*	-	5.10	9.89	7.32
Cereals	3.69	5.40	9.94	7.36
Pulses	8.34	7.54	9.00	8.44
Fruits and vegetables	6.62	6.87	9.81	7.68
Milk	4.09	5.07	10.28	8.04
Eggs, meat and fish	7.42	8.64	9.59	9.64
Condiments and species*	-	4.34	18.89	6.14
Fuel(diesel)	-	10.57	8.39	9.82
Food products Dairy products	-	8.96	10.21	6.58
Grain mill products	-	6.17	9.43	5.21
Sugar, khandsari and gur	-	11.39	2.32	7.16
Edible oils	-	11.14	9.64	4.43
Oil cake	-	10.49	8.32	8.84
Tea and coffee processing**	-	-	6.66	5.69
Fuel(diesel)	-	15.81	7.87	9.79

* Prior to April 1963 foodgrains and condiments and spices classification are not available.

* * Tea and coffee processing classification is available only from April 1982.

Source (Basic Data): As in Figure 1.



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