

Impact of WTO on Indian Agricultural Prices

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<<< Abstract

Globalization, the part of economic reforms, initiated in India during 1991. World Trade Organization (WTO), the second generation of economic reforms has emerged as extended trend of globalization. Like other sectors, agriculture has also undergone many changes since 1995, after WTO. The developed countries have established WTO according their welfares and have made various loopholes in the Agreement on Agriculture (AOA) and allied agreements so that they may block the agricultural imports from developing countries. On the other hand, India has reduced tariffs and other restrictions during the last few years. Because of high level of export subsidy which is given through the Green Box and Blue Box under WTO in developed countries, Indian farmers have to sell their agricultural products at a low price to face the competition with cheap foreign products. We analyzed that the annual average inflation rate in agriculture decreased from 10.52% in pre WTO period to 5.34% in post WTO period. Thus, these data indicate that the growth rate of wholesale prices of agricultural products in India has decreased significantly during post WTO period.

1. INTRODUCTION

World Trade Organization (WTO) was established on 1st January 1995. It is the second generation of economic reforms. WTO has emerged as extended trend of globalization. It has open more and more international trade and investment. In other words, it helps trade flow as freely as possible and achieves further liberalization gradually through negotiations. There are 153 members of it. It covers 90% trade of the world. This is the central stage which solves all the trade problems of the member countries and makes rules for easy trade. It is called third pillar of the world. 15 years have passed since the WTO started; hence, it is high time to study the impact of WTO in the country.

According to the latest survey the 52% of working population depends on agriculture in India and this is the single largest informal sector. Its contribution in GDP is 14.6% and in export is 9.3%. This sector not only provides employment or consumer goods but the raw material to a large number of industries also. Thus, any change in this sector, positive or negative, has a multiplier effect on the entire economy and any policy, directly or indirectly related to agriculture will affect a big part of Indian economy.

This study has emphasized that agricultural development is the central point for economic development of the country. So our study of evaluation of WTO has been focused on agriculture sector. With the introduction of WTO in the country several policy measures have been initiated in order to improve the economy. Like other

sectors, agriculture has also undergone many changes since 1995, after WTO in which Agreement on Agriculture (AOA) was most important for affecting the agriculture.

Further, it is necessary to study the changes that have taken place during the WTO period. Whether WTO has helped the farming community or not, in the sense that agricultural prices have increased or decreased over the WTO period.

2. OBJECTIVE OF THE STUDY

To study the impact of WTO on agricultural prices in India.

3. METHODOLOGY OF STUDY

The study has depended on secondary data collected from the book of Government of India, 'Economic Survey', 'Agricultural Statistics at a Glance' and the book of RBI 'Handbook of Statistics on Indian Economy'. The current study is based on the data related to agricultural prices in India. The period was classified as pre (1985-86 to 1994-95) and post (1995-96 to 2008-09) WTO period. The study used the following quantitative tools.

- (1) Annual Compound Growth Rate (ACGR)
- (2) Annual Average Growth Rate (AAGR)
- (3) Student t-test

t-test has been used to test the significance of the decreased growth rate of agricultural prices during post WTO period.

4. IMPACT OF WTO ON AGRICULTURAL PRICES

In a free market economy, prices are fixed by market forces. As a result there will be wide fluctuations in the prices. In the system especially low income people and small cultivators are hit hard. In the condition of low production and over production, Government adopts more export or more import policy to prevent the inflation or deflation. Because of high level of export subsidy which is given through the Green Box and Blue Box under WTO in developed countries, Indian farmers have to sell their agricultural products at a low price to face the competition with cheap foreign products. This impact of WTO on agricultural prices can be analyzed with the help of table 1, 2 and 3.

Table 1 studies the growth of wholesale prices of agricultural products in India (Base: 1993-94=100) during before and after WTO period. The wholesale price index of agricultural products increased from 47.6 in 1985-86 to 116.0 in 1994-95 - at an Annual Compound Growth Rate (ACGR) of 10.4% (or at an Annual Average Growth Rate (AAGR) of 10.52%). This increased from 116.0 to 238.7 in post WTO period - at an ACGR of 5.3% (or at an AAGR of 5.34%). While the ACGR of wholesale prices of general products decreased from 9.3% (or at an AAGR of 9.32%) in pre WTO period to 5.4% (or at an AAGR of 5.38%) in post WTO period and so the ACGR of wholesale prices of agricultural products as percentage of general products decreased from 1.0% (or at an AAGR of 1.07%) in pre WTO period to -0.1% (or at an AAGR of -0.03%) in post WTO period. Thus, it is clear that Indian agricultural prices are growing at a lower rate in post WTO period than pre WTO period. This decrease of order of 5.18 percentage points in AAGR also can be said to be significant, when it is tested on the basis of student 't' test (table 2).

Table 3 studies growth rates of wholesale prices of selected agricultural commodities in India in pre and post WTO period. Under 'Foodgrains', the wholesale prices (Base: 1993-94=100) of rice, wheat and pulses increased from 48, 47 and 45 in 1985-86 to 111, 109 and 122 in 1994-95 - at annual compound growth rates of 9.8%, 9.8% and 11.7%, respectively. In post WTO period these prices increased from 111, 109 and 122 in 1994-95 to 213, 240 and 260 in 2008-09 - at annual compound growth rates of 4.8%, 5.8% and 5.6%, respectively. Similarly, under 'Non-foodgrains', the wholesale prices of tea, raw cotton, raw jute, ground nut seed and edible oils increased from 46, 39, 63, 49 and 46 in 1985-86 to 82, 154, 120, 123 and 111 in 1994-95 - at annual compound growth rates of 6.6%, 16.5%, 7.4%, 10.8% and 10.3%, respectively and in post WTO period these became from 82, 154, 120, 123 and 111 in 1994-95 to 187, 220, 207, 249 and 188 in 2008-09 - at annual compound growth rates of 6.1%, 2.6%, 4.0%, 5.2% and 3.8%, respectively. Thus, we can say that the growth rates of prices of various agricultural commodities have decreased in post WTO period.

Table- 1
Wholesale Price Index of Agricultural Products

(Base : 1993-94 = 100)

Year	Wholesale price Index of Agricultural Products	Annual Inflation Rate (agriculture)	General Index of Wholesale Prices	Annual Inflation Rate (general)	Agricultural Price Index as % of General Index	% increase
1985-86	47.6	-	50.6	-	94.1	-
1986-87	52.7	10.71	53.6	5.93	98.3	4.46
1987-88	59.6	13.09	57.9	8.02	102.9	4.68
1988-89	62.7	5.20	62.3	7.60	100.6	-2.24
1989-90	64.3	2.55	66.9	7.38	96.1	-4.47
1990-91	73.1	13.69	73.6	10.01	99.3	3.33
1991-92	87.2	19.29	83.9	13.99	103.9	4.63
1992-93	94.1	7.91	92.3	10.01	102.0	-1.83
1993-94	100.0	6.27	100.0	8.34	100.0	-1.96
1994-95	116.0	16.00	112.6	12.60	103.0	3.00
annual % increase	10.4*	10.52**	9.3*	9.32**	1.0*	1.07**
1995-96	126.0	8.62	121.6	7.99	103.6	0.58
1996-97	136.4	8.25	127.2	4.61	107.2	3.47
1997-98	140.3	2.86	132.8	4.40	105.6	-1.49
1998-99	157.2	12.05	140.7	5.95	111.7	5.78
1999-00	159.1	1.21	145.3	3.27	109.5	-1.97
2000-01	163.7	2.89	155.7	7.16	105.1	-4.02
2001-02	169.5	3.54	161.3	3.60	105.1	0.00
2002-03	175.3	3.42	166.8	3.41	105.1	0.00
2003-04	182.9	4.34	175.9	5.46	104.0	-1.05
2004-05	186.7	2.08	187.3	6.48	99.7	-4.13
2005-06	190.7	2.14	195.6	4.43	97.5	-2.21
2006-07	204.2	7.08	206.2	5.42	99.0	1.54
2007-08	219.2	7.35	215.8	4.66	101.6	2.63
2008-09	238.7	8.90	234.0	8.43	102.0	0.39
annual % increase	5.3*	5.34**	5.4*	5.38**	-0.1*	-0.03**

* Annual Compound Growth Rate (ACGR)

** Annual Average Growth Rate (AAGR)

Source: Government of India, Economic Survey, Various issues.

5. CONCLUSION

i. The Annual Compound Growth Rate (ACGR) and Annual Average Growth Rate (AAGR) of wholesale prices of agricultural products have decreased in post WTO period. These decreased from 10.4% and 10.52% in pre WTO period to 5.3% and 5.34%, respectively in post WTO period.

ii. The decrease in annual inflation rate in agriculture also can be said to be significant, when it is tested on the basis of student 't' test.

iii. The ACGR of wholesale prices of various agricultural commodities (rice, wheat and pulses, tea, raw cotton, raw jute, ground nut seed and edible oils) have decreased separately also in post WTO period.

It is clear from above analysis that the price raise of agricultural products in India has decreased significantly during post WTO period.

Table - 2
Testing of Significance of Decrease in Inflation Rate of Agriculture

Annual inflation rate in agriculture*(X ₁)	d ₂ = (X ₁ - X̄ ₁)	d ₁ ²	Annual inflation rate in agriculture*(X ₂)	d ₂ = (X ₂ - X̄ ₂)	d ₂ ²
10.71	0.19	0.04	10.71	0.19	0.04
13.09	2.57	6.60	13.09	2.57	6.60
5.20	-5.32	28.30	5.20	-5.32	28.30
2.55	-7.97	63.52	2.55	-7.97	63.52
13.69	3.17	10.05	13.69	3.17	10.05
19.29	8.77	76.91	19.29	8.77	76.91
7.91	-2.61	6.81	7.91	-2.61	6.81
6.27	-4.25	18.06	6.27	-4.25	18.06
16.00	5.48	30.03	16.00	5.48	30.03

Null hypothesis: there is no decrease in growth rate of agricultural prices in post WTO period.

$$S = \sqrt{\{(\sum d_1^2 + \sum d_2^2) / (n_1 + n_2 - 2)\}}$$

$$n_1 = 9, n_2 = 14$$

$$S = \sqrt{\{(240.33 + 142.00) / (9 + 14 - 2)\}}$$

$$S = 4.27$$

$$t = \{(\bar{X}_1 - \bar{X}_2) / S\} \sqrt{\{(n_1 - n_2) / (n_1 + n_2)\}}$$

$$t = \{(10.52 - 5.34) / 4.27\} \sqrt{\{(9 - 14) / (9 + 14)\}}$$

$$t = 2.8415$$

Here, $t(2.8415) > t_{0.1(df=21)}(2.8314)$

Hence, null hypothesis is not true as such there is a significant decrease in growth rate of agricultural wholesale prices during post WTO period.

* Related to pre WTO period

** Related to post WTO period

Table - 3
Index Numbers of Wholesale Prices — Selected Agricultural Commodities

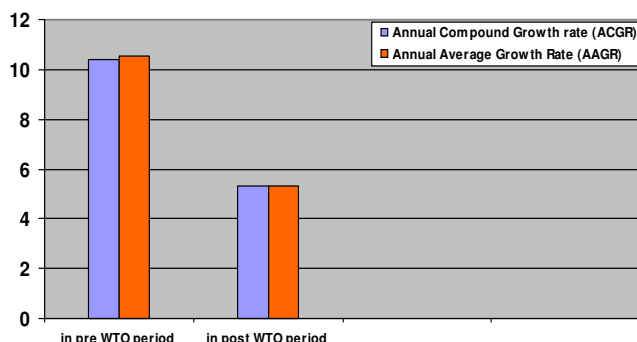
YEARS Commodities	1985-86	1994-95	2008-09	ACGR (1985-86 to 1994-95)	ACGR (1994-95 to 2008-09)
Rice	48	111	213	9.8	4.8
Wheat	47	109	240	9.8	5.8
Pulses	45	122	260	11.7	5.6
Tea	46	82	187	6.6	6.1
Raw Cotton	39	154	220	16.5	2.6
Raw Jute	63	120	207	7.4	4.0
Ground Nut Seed	49	123	249	10.8	5.2
Edible Oils	46	111	188	10.3	3.8

ACGR= Annual Compound Growth Rate

Source: Government of India, Economic Survey, various issues

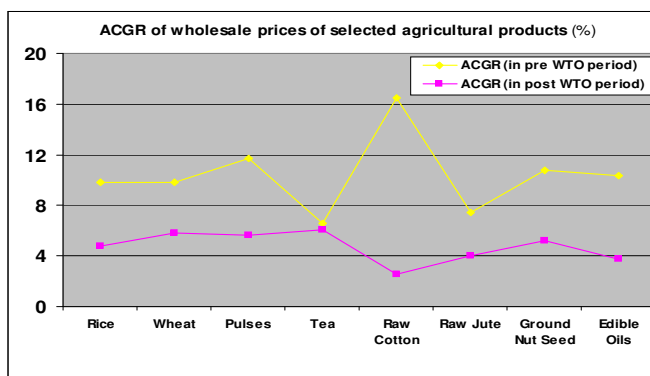
Graph (i)

ACGR and AAGR of wholesale prices of agricultural products (%)



Graph (ii)

ACGR of wholesale prices of selected agricultural products (%)



6. SUGGESTIONS

On the basis of our study following package of measures is suggested to improve the condition of Indian agricultural prices.

The developed countries have established WTO according their welfares and have made various loopholes in the Agreement on Agriculture (AOA) and allied agreements so that they may block the agricultural imports from developing countries including India. On the other

hand, India has reduced tariffs and other restrictions during the last few years. To protect the Indian agriculture and Indian farmers from foreign competition, it is therefore imperative for the government to lay down priorities for action. In particular, action is required in the following directions: -

1. India (alongwith other developing countries) should press at international level to fix the upper limit (in percentage) of agricultural subsidy and support.
2. The surface level of the subsidy should be settled separately for different-different agricultural products, not on the average basis.
3. Same the agricultural subsidies, the upper limit (in percentage) of agricultural tariffs should be fixed on weighted basis (not on the average basis) to get the meaningful market access opportunities.
4. All type of boxes (green box, blue box and special & differential box); the formation of WTO should be included in Amber Box to be subjected to reduction commitments.
5. All measures taken by developing countries for poverty alleviation, rural development, rural employment and diversification of agriculture should be exempted from any reduction commitments.

If the package of above suggestions is sincerely put in practice, we can safely entertain the hope that the agriculture of our country not only will develop but will face competition steadily in other countries also. But how far the country will succeed in achieving this aim certainly depends on the co-operation that the public and the administrative machinery shall provide.

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