# *Performance of Agricultural Capital Formation in India : An Impact of AOA*

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***Abstract***

*World Trade Organization (WTO), the modified transformation of GATT 1947 including new package of various agreements, has made easier way to flow the trade among the member countries. As India is an agro-prime country, Agreement on Agriculture (AOA) becomes very important and sensitive issue for India. But with trade openness factor some paradoxical things are included in this agreement like green box and blue box arrangement which exist especially in developed countries. Through this way developed countries may block the imports from the developing countries according their welfares without any objection of other countries. So Indian farmers are unable to compete with the cheap subsidized product of developed countries and finally they have no choice except low priced selling of their agricultural products. Thus this loss of income of farmers decreases the agricultural investment. We analyzed that the annual average of Gross Capital Formation (GCF) in agriculture & allied sectors as percentage of Gross Domestic Capital Formation (GDCF) and as percentage of Gross Domestic Product (GDP) decreased from 21.57% and 2.55% in pre WTO period to 6.22% and 2.16%, respectively, in post WTO period in India.*

## 1. INTRODUCTION

WTO, the third pillar of the world was established on 1st January, 1995 to remove the blockage of trade flow among the member countries. Because of heavy dependence of population on agriculture, Agreement on Agriculture (AOA) becomes most important for India. AOA is a significant first step towards liberalizing agricultural trade and making agriculture a less distorted sector. The objective of this agreement is to increase market orientation in agricultural trade. The Agreement on Agriculture includes three board areas (i) market access, (ii) domestic support, (iii) export subsidies.

In this agreement, WTO has fixed the limit (%) of cutting rates in above three areas which have to be followed by the member countries. Tariffs, domestic support and export subsidies have been reduced by 24%, 13% and 24% in developing countries and by 36%, 20% and 36%, respectively, in developed countries. It can be understood properly with the help of table 1.

Agriculture plays prime role in India as its 70% population depends on agriculture. Almost 52%* of working population engages in it. Its contribution in GDP is 13.9%* . Agriculture not only provide raw material to industries but market also for industrial product. So we all accept the importance of capital formation in agriculture for the development of the country. Without sufficient high degree capital formation in this sector economic development will suffer a setback.

Various policies have been started to develop the agricultural sector and have affected also this sector but after the WTO (especially AOA) which was the package of changes for agriculture have widely affected this sector.

Further, it can be analyzed the changes in agricultural sector during WTO period. To study the agricultural development, the trend of capital formation in this sector has been measured over the WTO period.

**Table 1**
**Reduction Commitments Under AOA**

**NUMERICAL TARGETS FOR AGRICULTURE**

| | **Developed countries** 6 years: 1995-2000 | **Developing countries** 10 years: 1995-2004 |
|---|---|---|
| **Tariffs** | | |
| average cut for all agricultural products | -36% | -24% |
| minimum cut per product | -15% | -10% |
| **Domestic support** | | |
| total AMS cuts for sector (base period: 1986-88) | -20% | -13% |
| **Exports** | | |
| value of subsidies | -36% | -24% |
| subsidized quantities (base period: 1986-90) | -21% | -14% |

Least developed countries do not have to make commitments to reduce tariffs or subsidies.

Source: www.wto.org.

## 2. OBJECTIVE OF THE STUDY

To study the impact of AOA on agricultural capital formation in India.

## 3. SOURCE OF DATA AND STUDY PERIOD

The data for study have been collected from the various books of Government of India like 'Economic Survey', 'Agricultural Statistics at a Glance' and the publication of RBI 'Handbook of Statistics on Indian Economy'. For the purpose of study the data for pre WTO period (1980-81 to 1994-95) has been compared with those of per WTO period (1995-96 to 2010-11).

## 4. IMPACT OF AOA ON CAPITAL FORMATION IN AGRICULTURAL SECTOR

Capital formation depends on profit expectations and this depends on revenue and cost. Because AOA affects agricultural prices, so naturally profit expectations and then capital formation in agriculture sector also would be affected by the AOA. This impact can be studied with the help of table 2.

Table 2 shows the performance of Gross Capital Formation (GCF) in agriculture & allied sectors in India during pre and post WTO period. For this purpose we have studied GCF in agriculture & allied sectors as percentage of Gross Domestic Capital Formation (GDCF) and as percentage of Gross Domestic Product (GDP) at constant prices in pre and post WTO period i.e. 1980-81 to 1994-95 and 1995-96 to 2010-11, respectively. It is clear from the table that annual average of GCF in agriculture & allied sectors as percentage of GDCF has decreased from 21.57% in pre WTO period to 6.22% in post WTO period. Similarly, the annual average of GCF in agriculture and allied sectors as percentage of GDP has decreased from 2.55% in pre WTO period to 2.16% in post WTO period. This decline can be simply noticed in the graph (A).

**Table 2**

**Gross Capital Formation in Agriculture And allied Sectors (At Constant Prices)** (Rs. Crores)

| Year | Gross Capital Formation (GCF)* in Agriculture & Allied Sectors (at constant prices) | Gross Domestic Capital Formation (GDCF)* (at constant prices) | Gross Domestic Product (GDP)* at Factor Cost (at constant Prices) | Share of agricultural GCF in GDCF (%) | Share of Agricultural GCF in GDP (%) |
|---|---|---|---|---|---|
| 1980-81 | 14233 | 29230 | 401128 | 48.69 | 3.55 |
| 1981-82 | 14079 | 33966 | 425073 | 41.45 | 3.31 |
| 1982-83 | 14529 | 36934 | 438079 | 39.34 | 3.32 |
| 1983-84 | 14725 | 41104 | 471742 | 35.82 | 3.12 |
| 1984-85 | 14948 | 49355 | 492077 | 30.29 | 3.04 |
| 1985-86 | 14132 | 60401 | 513990 | 23.40 | 2.75 |
| 1986-87 | 13708 | 65306 | 536257 | 20.99 | 2.56 |
| 1987-88 | 14294 | 79733 | 556778 | 17.93 | 2.57 |
| 1988-89 | 14762 | 100217 | 615098 | 14.73 | 2.40 |
| 1989-90 | 13424 | 119258 | 656331 | 11.26 | 2.05 |
| 1990-91 | 14836 | 149536 | 692871 | 9.92 | 2.14 |
| 1991-92 | 13389 | 147285 | 701863 | 9.09 | 1.91 |
| 1992-93 | 14508 | 176722 | 737792 | 8.21 | 1.97 |
| 1993-94 | 13523 | 198412 | 781345 | 6.82 | 1.73 |
| 1994-95 | 14969 | 263356 | 838031 | 5.68 | 1.79 |
| Annual average 1980-81 to 1994-95 | | | | **21.57** | **2.55** |
| 1995-96 | 15690 | 319527 | 899563 | 4.91 | 1.74 |
| 1996-97 | 16176 | 334999 | 970082 | 4.83 | 1.67 |
| 1997-98 | 15942 | 374480 | 1016595 | 4.26 | 1.57 |
| 1998-99 | 14895 | 393021 | 1082747 | 3.79 | 1.38 |
| 1999-00 | 43473 | 506244 | 1786526 | 8.59 | 2.43 |
| 2000-01 | 39027 | 511788 | 1864301 | 7.63 | 2.09 |
| 2001-02 | 48215 | 520656 | 1972606 | 9.26 | 2.44 |
| 2002-03 | 46823 | 618035 | 2048286 | 7.58 | 2.29 |
| 2003-04 | 44833 | 759325 | 2222758 | 5.90 | 2.02 |
| 2004-05 | 76096 | 1064041 | 2971464 | 7.15 | 2.56 |
| 2005-06 | 86611 | 1279891 | 3254216 | 6.77 | 2.66 |
| 2006-07 | 90710 | 1531568 | 3566011 | 5.92 | 2.54 |
| 2007-08 | 105030 | 1901928 | 3898958 | 5.52 | 2.69 |
| 2008-09 | 127127 | 1931380 | 5303567 | 6.58 | 2.40 |
| 2009-10 | 131139 | 2363670 | 6091485 | 5.55 | 2.15 |
| 2010-11 | 142254 | QE 692031 | QE 7157412 | 5.28 | 1.99 |
| Annual average 1995-96 to 2010-11 | | | | **6.22** | **2.16** |

*Source: 1. RBI: Handbook of Statistics on Indian Economy, various issues*

*2. Government of India, Economic Survey, various issues*

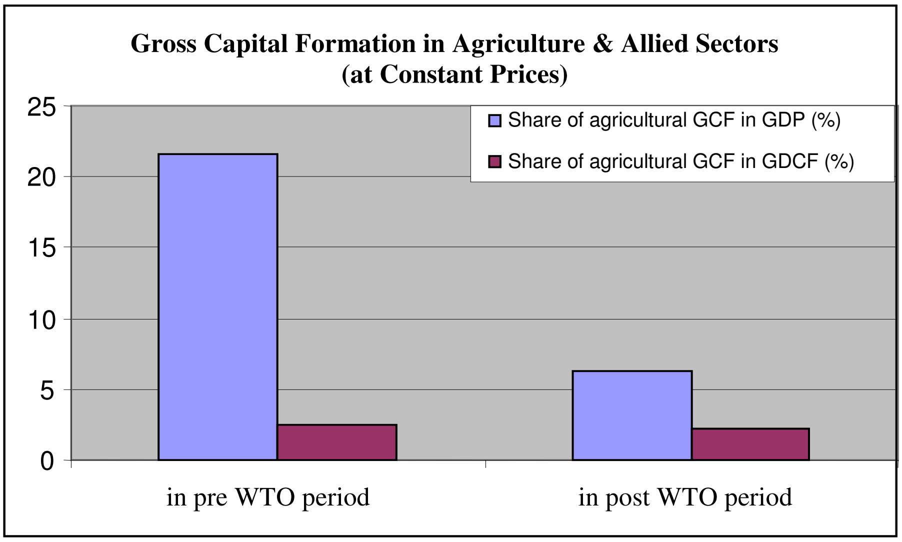
* These data at factor cost at constant prices relates to 1993-94 prices, from 1999-00 data are based on series 1999-00 prices and from 2004-05, data are based on new series 2004-05 prices. QE : Quick Estimates

Thus, it is clear that GCF in agriculture & allied sectors as percentage of GDCF and as percentage of GDP at constant prices have declined during the post WTO period.

## 5. CONCLUSION

(i) Gross Capital Formation (GCF) in agriculture and allied sectors at constant prices has adversely been affected in WTO period. The annual average of Gross Capital Formation (GCF) in agriculture and allied sectors as percentage of Gross Domestic Capital Formation (GDCF) and as percentage of GDP decreased from 21.57% and 2.55% in pre WTO period to 6.22% and 2.16%, respectively, in post WTO period.

It is clear from above analysis that there is an adverse impact of AOA on capital formation in agriculture and allied sectors in India.




**Graph (A)**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